

The Cottage
Gardener

1852


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THE COTTAGE GARDENER

CONDUCTED BY GEORGE W. JOHNSON, ESQ.

No. 201.]

THURSDAY, AUGUST 5, 1852.

[PRICE 2d.]

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WEEKLY CALENDAR.

M D	W D	AUGUST 5-11, 1852.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bef. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
5	Th	Long-leaved Mint flowers.	30.297—30.226	71—53	N.	—	32 a. 4	40 a. 7	10 10	19	5 40	218
6	F	PRINCE ALFRED R. 1844.	30.234—30.173	67—53	E.	—	33	38	10 27	20	5 38	219
7	S	Venerian Sunnatch flowers.	30.050—30.01	75—55	N.E.	—	35	36	10 45	21	5 26	220
8	SUN	SUNDAY AFTER TRINITY.	30.018—30.088	80—52	N.E.	—	30	34	11 7	22	5 19	221
9	M	Purple Melic flowers.	30.034—30.064	69—55	N.E.	—	38	32	11 34	23	5 11	222
10	Tu	St. Barnaby's Thistle flowers.	30.085—30.075	71—53	N.E.	—	40	31	morn.	24	5 2	223
11	W	Dog-days end.	30.106—30.098	79—52	S.	—	41	29	0 8	25	4 53	224

HYDROLOGY OF THE W.—At Chislehurst, an observations during the last twenty-five years, the average highest and lowest temperatures of these days are 73° and 51.8° respectively. The greatest heat, 93°, occurred on the 10th in 1842; and the lowest cold, 36°, on the 6th in 1833. During the period 101 days were fine, and on 71 rain fell.

BRITISH WILD FLOWERS.

CROWFOOTS—RANUNCULACEÆ.

(Continued from page 250.)

AQUILEGIA. COLUMBINE.



GENERIC CHARACTER.—*Calyx* none. *Petals* five, below the fruit, egg-shaped, mostly pointed, nearly flat, equal, spreading. *Nectaries* five, equal, alternate with the petals, each of them tubular, gradually widening upwards, oblique at the mouth, the outer margin ascending, the inner attached to the receptacle; their lower portion extended into a long tapering spur, blunt at the extremity. *Stamens* numerous, thirty to forty, awl-shaped, erect; the outer ones shortest, innermost longest, thickened, and wrinkled, closely enfolding the germens. *Anthers* terminal, heart-shaped, erect. *Ger-*

mens five, oblong, egg-shaped, tapering into awl-shaped upright styles, with simple stigmas. *Seed vessels (siliques)* five, cylindrical, pointed, parallel, straight, of one valve bursting at the inner side downwards. *Seeds* numerous, egg-shaped, smooth, keeled, attitude edges of the seed-vessel.

AQUILEGIA VULGARIS: Common Columbine.

Description.—It is a perennial. *Root* tuberous. *Herbage* smooth and naked. *Stem* erect, two or three feet high, somewhat leafy, round, generally branched, and bearing several flowers. *Root-leaves* on long stalks, twice 3-leafted; leaflets broadly wedge shaped, bluntly lobed and cut, milky-green beneath; those on the stem more simple, and nearly stalkless. *Stem-leaves*, hard-shaped, with oval entire lobes. *Flowers* hanging down, bright purple, or purplish, somewhat downy, stalks. *Petals* pointed. *Nectaries* much incurved at the end of the spur. *Germens* and *Seed-vessels* hairy. There is a sub-species with stems once flowered; smaller size, and spurs less curved.

Places where found.—In meadows, pastures, and thickets. Not common.

Time of flowering.—June and July.

History.—We think the botanical name is derived from *Aquilex*, a conveyer of water by pipes, referring to the tubular form of the nectaries. The English name is derived from *Columba*, a dove, from the fancied resemblance of the nectaries to the head and neck of that bird. The usual colour of the flowers, when wild, is pale blue, but they occur of other tints, and in gardens they appear with their petals and nectaries doubled in various modes, and of still more dissimilar colours. All parts of the Columbine have been recommended for use in medicine, but it belongs to a dangerous tribe, and Linnaeus warns of children killed by an excessive dose of it. Probably the only mode of employing the Columbine officinally, is by making a tincture of its flowers, adding to it a little sulphuric acid, and employing it as a wash for scorbutic affections of the gums. Goats eat it, but other domestic animals reject it. As the form of the nectary prevents the bee obtaining its honey in the usual mode, this insect tears an entrance near the bottom of the nectary to enable it to introduce its proboscis. The Columbine has been made, says Mr. Phillips, the emblem of Folly, but whether on account of the party-colour which it frequently takes in the garden, or in allusion to the shape of the nectary, which turns over like the cap of the old jesters, and those which painters give to Folly, we are left to surmise. In some country places, W. Browne, the poet tells us

"The Columbine in twain often taken,
Is then a symbol to such as are forsaken."

RETURNING to the subject of the early History of Poultry, where we left it at page 286, we must commence by observing, that in our earliest printed work upon English farming, Sir Anthony Fitzherbert's *Booke of Husbandry*, published in 1532, there occurs no other notice than the following, under the title of "What a Wylde wyfe shulde do in generall."

"Thou must geve thy poleyn (pullen, or poultry) meate in the mornyng, and whan tyme of the yere cometh thou must take hede how thy hennes, dukes, and geese do lay, and to gather up theyr egges, and whan they waxe brodye,

to sette them there are noo beastes, wyne, nor other vermyne help them. And thou must knowe, that all hole (whole) fowles will sytte a moneth, and all cloven footed fowles will sytte but three weekes, except a peyhenn, and great fowles, as Cranes, Bustardes, and suche other. And whan they have brought forth theyr byrdes, to see that they be well kepte from the Gloyd, Crows, Fulmyntes, and other vermyne."

We may observe, also, judging from the prices that poultry were scarce at that period, for money was then of much greater value than in the present century. Thus we have before us a memorandum, made in 1536,

"That it is agreed by compositions that the Fellowship of the Poulterers shall serve the King's Majesty (Henry VIII.) with these kinds of poultry stuff following, on the price as here after appeareth."

"Pecocks, old, the pece, 2s.
Pechyks, the pece, 14d.
Capons of gr(owth) of the best, the pece, 20d.
Capons good the pece, 14d.
Capons the pece, 8d.
Hennes of gr(owth) the pece, 7d.
Grene Geese from Ester tyll mydsommer, the pece, 7d.
Geese grett (great) from mydsommer tyll shroftide, the pece, 8d.
Eggs from Ester to Myghelmas, 16d. (the dozen)
Eggs from Myghelmas tyll Ester, 20d. (the dozen)."

Passing over Tusser's *Five Hundred Fockts of Husbandry*, which barely touch upon the subject of poultry, we come next to Barabry Gooze's translation of Heresbach's *Four Bookes of Husbandrie*, published in 1578. The text of Heresbach is no more than a compendium from the works of Cato, Varro, and Columella, but Gooze introduces some additions, one of which we shall separate from the less interesting contents:

"Your Henne houses must bee made in that parte of your house, as lieth in the Winter towards the Fyng of the Sunne, and lonyng as nere as maie be to some Kille, Ouen, or Chimney, or to the Kitchin, so as the smoke maie come amongeste them: for smoke it verie holesome for this kinde of foule. And that was (I thinke) the cause that the old people made choise in their quitrentox of smoke Hennes, as of the beste, as it appeareth by olde Rentalles. Lette the front of your Henne house stande alwaies towards the Easte, and to that coaste let the doore open. Let the inner roomes bee well furnished with Lottes and Lathers, and small windowes opouyng Eastward, at which your Poultrie maie lue out in the mornynge, and come into the roust at night. Looke that you make them close at night, and let the windowes bee well litted for feare of Vermin. Let your nestes and lodgynges, bothe for laiyng and broodyng, bee orderly caste, and against euery neste and rooustyng place, place steppes and boordes to crie up by, making them as rough as maie be, that the Hennes maie take good holt when thei slee up to slepe, and not by their ouer smoothnesse, bee forced to fluttre and hurt their Egges. It shall not bee anisse, if you pargett the house bothe within and without with good Mether, whereby neither Weesell, nor other hurtfull Vermin maie enter in. Boorded floore are not for foule to roust upon, whiche almoste all kinde of Birdes refuse, because of the hurte that thei receiue by their dounge, whiche if it cleue to their secte, breedeth the Goute. And therefore to roust upon, you must make them perches, whiche Columella would, should be made fower square: but it is better to haue them rounde, so that thei be not too smooth for them to take holde by. Let the Perches reach from one side of the wall to the other, so as thei stande from the floore a foote in height, and twoo foote in distance one from the other: and thus haue you the fashion of your Henne house. The Courte where thei goe, must bee cleane from dung and dirtinesse, not hanyng water in it, sayth in one place, and that must be verie faire and cleane: for if it bee puddled, or durty, it breedeth (as I said before) the Plops. To keepe their water cleane, you maie haue three cartons of stone vessel, or troughes of Wood, couered in the toppes, in the which there muste bee set small holes so bigge, as the head of the foule maie easely enter: for if you should not keepe them thus couered, the Poultrie would in their drinkyng, defile and poison it with their dounge. Their meate muste be given them betimes in the morning for straiying abroad, and a litle before night, that thei maie come the nyctelie to their rest. Those that bee in the Coope, must (as Columella sayth) be fedde thrise in the daie: the others must be used to an accustomed voide, that thei maie come at the calling. The number must bee well marked: for thei some geaue their keeper. Beside, you muste haue rounde

about by the walles, good plentie of duste, wherein thei maie bathe and proue them selves: For as the Swine delighteth to wallowe in dirte, so dooth this kinde to bathe and tumble in the duste. And this is (I thinke) almoste all that is to be said of Pulletin."

FORSYTH MSS.

THE letters of the next person eminent in the republic of science, which occur among these manuscripts, are a few—would they were more—from FRANCIS MASSON. He was of French extraction, but being well skilled both in the botanical and cultural knowledge applicable to garden plants, he was enrolled among the number of the Royal gardeners at Kew, and was the first, in modern times, we believe, despatched under royal patronage from England especially for the purpose of collecting from other lands their floral novelties. The first region he was required to examine was the Cape of Good Hope, and the results of his researches are narrated in the 66th volume of the *Philosophical Transactions*. A contemporary thus epitomises the narration:—

"Our botanical traveller, in his first journey, which was performed in Dec. 1772, and Jan. 1773, went as far as Schwellendam, a place about 150 miles N. E. from the Cape Town; but, finding the season too far spent for making any considerable collections, returned back to the Cape by the same road he went. He was attended by a Dutchman, and a Hottentot, who drove his waggon, which was drawn by eight oxen—the manner of travelling there. In this journey, however, he collected the seed of the many beautiful species of *Frica*, which have succeeded so well in the Royal Garden at Kew.

"His second journey, begun in Sept. 1743, was performed in company with Dr. Thunberg, a native of Sweden, who was sent out by the Dutch to collect plants at the Cape, and is now on that errand in the East Indies. In this journey, which lasted four months and fourteen days, our travellers were very successful in their botanical researches, collecting many plants and shrubs that were new, but which were dearly purchased, considering the fatigues and dangers here recounted. And probably neither they nor their plants would have been heard of more, had not the servants been wiser than their masters, by refusing to advance farther, or to venture among the Caffres, a savage race, who, they said, would kill them, were it only to get the iron belonging to their waggons.

"In his third journey, Dec. 1774, Mr. Masson proceeded as far as the last Dutch habitation, 550 miles N. from the Cape, and then changed his course, going S. E. On his return, he has reason to congratulate himself on being now safe in Kew Gardens—escaped from torrents and precipices, from deserts and lions; and as to the succulent plants and aromatic shrubs thus procured, we cannot help comparing them to the water of Bethlehem, which three mighty men drew, in jeopardy of their lives, and which David therefore, though he had longed for it, neverthless would not drink, but poured it out unto the Lords. (2 Sam. xxiii. 16.)

Mr. Masson remained at the Cape more than twenty years, for the following letter is dated there on the 15th of May, 1798:—

MR. F. MASSON TO MR. FORSYTH.

A few days ago I received a letter, dated May, 1791, from T. Hadley Swell, secretary to the Natural History Society, of which I am an unworthy member. I have long had a sincere desire to contribute something, but my constant attention has been in botanical researches, and the animals of this country are, I believe, pretty well known. The fishes here, I believe, are little known, and would be some addition to natural history. I have collected many of them, and made some drawings—if they can contribute anything to the advancement of science they will be much at their service. I am busy at present describing and drawing the *Stapelias*, of which I have discovered about thirty new specimens, and I believe that there are many more, but they grow at such a distance from the Cape, and in so unfrequented places, that it is very difficult to find them out.

We have had a ship here from Port Jackson for provisions; by the accounts by her the place is not so bad as it has been represented. Captain Paterson returns from Norfolk Island there.

I send this by Mr. Goodsman, a British officer, with a small chip box containing two specimens of a large species of Chiton, which I do not remember to have seen before. I beg you will present them to the Society for their inspection.

The collection of the succulent genus to which he alludes in the above letter, was depicted and described in a work he published at London in 1796, entitled, *Stapeliae Novae*. Like other searchers after the natural treasures of foreign lands, the love of change, the desire for discovery, and impatience under restraint, predominated over all other considerations; and, after a year's residence in England, with the king's permission, he sailed to America. One or two letters from him, dated Montreal, at the close of 1801, occur among these manuscripts, but they allude to no subject of importance, nor were his researches in the far west compensated by any discoveries at all to be compared with those which rewarded him at the Cape. From North America he proceeded to the West Indies, and died there, in the island of Montserrat, at the close of 1806, in the 61th year of his age.

GOSSIP.

MESSRS. WEEKS AND CO., of King's Road Nursery, Chelsea, have the following *Water Lilies* doing well in an open heated pond:—*Nymphaea dentata*, *N. cyanea*, *N. parvula*, *N. rubra*, *N. alba*, *N. hybrida*, *Victoria regia*, *Elmcharis Humboldtii*, and *Aponogeton distachyon*. The six first flowering nicely.

Our respected correspondent, S. P., Hushmore, having recently visited the Channel Islands, says—

"One of the first things which attracted my notice, on landing in Jersey, was a printed bill, or notice of the *Jersey Floricultural Exhibition*. This was held, July 14th and 15th, in the Cattle Market, at St. Helier. On entering, the productions were seen arranged under the colonnade, which forms three sides of the square, affording both shade and space to the visitors. On the second day was a *déjeuner* at half-past four, to which parties were admitted by tickets at five shillings each.

"In *vegetables*, with the exception of being forwarder for the season than with us, there was nothing remarkable; the lettuces and potatoes were, however, decidedly fine.

"The *Fruits* were better. A mixed basket belonging to Mr. J. Robin, of Petit Manoir, containing a pine apple in

the centre, and surrounded by grapes, currants, gooseberries, &c., attracted much attention, and obtained a first prize. Apricots, peaches, cherries, strawberries, raspberries, were good, but our English cultivators of these fruits have nothing at present to fear from the Jersey gardeners. A new cherry, which was exhibited by Mr. B. Saunders, one of their leading nurserymen, and called *Merveille D'Hollande*, elicited considerable praise.

"The *Flowers* were not up to those of many of our English provincial exhibitions, either in variety or perfection of cultivation. The specimens of *Heaths*, *Calceolarias*, *Geraniums*, and *Pansies*, were second-rate; *Celosias*, *Impatiens*, and *Carnations*, good; and the show of annuals, biennials, and perennials, with the exception of a stand of capital Sweet *William*s, were few and inferior, probably owing to the heat and dryness of the season; this affected also the roses, of which there were but few. Three large bouquets of cut flowers, upon tables in the centre pavilion of the square, were the best things in the exhibition; here, also, was the band of music, with seats placed round for the visitors, who were said to be not so numerous as on former occasions.

"To the lovers of flowers, Jersey offers many attractions in its prettily-cultivated suburban gardens; here the plants assume a vigour of growth and perfection seldom attained in England. Climbers of various kinds cover the verandas, and fronts and ends of many of the houses; whilst *Geraniums*, *Fuchsias*, and *Verbenas*, display their beauties in full luxuriance under and up the sides of the windows; and, as an example of the mildness of the climate, I noticed, in one of the gardens at St. Heliers, a yellow *Calceolaria*, named by the owner and raised *Capensis*, about sixteen feet round, three feet high, dense in foliage, and with at least 200 flowers upon it, in fine corymbose heads, of the size of large oranges; it had stood out in the open ground, without protection, for the last seven years. In another garden, at St. Aubins, my attention was caught by an *Hydrangea*, full thirty six feet round, four feet high, circular in form, and having at least 2000 flowers—a complete dome of purple. The gentleman in whose garden, or rather court-yard, it grew, said he bestowed no particular attention upon it, beyond cutting out in the spring the dead flowers and some of the old wood; it grew in the ordinary soil, which is a debris from the granite rocks in the vicinity, and as these appear to contain much ferruginous matter, it may probably account for the almost universally blue colour of the Jersey *Hydrangeas*.

"*Carnations* and *Pinks* are another class of flowers much cultivated in the Jersey gardens, and many of the choicer collections of these are truly splendid. Two shillings per hundred was the price asked me by one of the best growers for young seedling plants, and I brought away as many as I could find room for in my carpet bag. *Phloxes* do not appear to do well with them; the colours run; in other words, they want distinctness and brightness; a circumstance perhaps attributable to the hot sun, and dryness of the soil; but floriculture in Jersey appears to owe less to skilful cultivation than to its genial climate. The taste of the people turns more to fruit and vegetables. The Charmontel pear, apples, figs, &c., so crowd the gardens, that nothing short of the natural capabilities of the island could insure the perfection to which so many things attain. The Jersey tree-cabbage often occupies much space; from the stems of these walking-sticks are made; and when dried and polished they are light and handsome. *Fuchsias* assume the character of small trees; at least, I saw some ten and twelve feet high, with stems as thick as my wrist.

"The walks and rides in Jersey are delightfully romantic. Its cliffs and bays, its shady lanes (the latter forming a complete network over the island); its numerous orchards, with the pretty Jersey cows tethered under the shade of the trees; its rustic farm-houses and ornamental cottages in which the English chiefly reside, are met with at every turn. The hills, in addition to their inland and sea views, abound in many wild plants; amongst them I noticed *Harebells* and *Alpine Pinks* of two or three colours, the *Lotus corniculatus*, *Cent. ureas*, &c.; the latter bloom on the tops of the stone-walls in conjunction with the *Antirrhinum* and *Red Kale*rian, displaying their blossoms above the dense mass of creepers that clothe their sides. Occasionally may be seen among the heaths the beautiful and harmless emerald green lizard

sporting in the sun (and restricted in its locality in England, I believe, to Blackheath); these, and the many insect tribes, furnish abundant interest and pleasure to the tourist and lover of natural history.

"The fruit, vegetable, and fish markets of St. Heliers will well repay a visit, not omitting even the cattle market, in which may be seen the beautiful Jersey cows, led about by women with halters, who act the part of vendors. A pair of these tractable animals we brought away on board our steamer. By the address affixed to their horns, I saw they were for some gentleman in Connecticut, United States, and thoroughly pitted them, both for their change of home and their voyage."—S. P., *Rushmere*.

Another correspondent says—

"I made a mistake in stating the *Standard* *Syrus Japonica* to be twelve feet high, and, therefore, wish to correct it. The one I have is on its own roots, and has several stems rising from the soil. It is ten feet within an inch by two, and is seven feet in diameter at the base, and trained as a pyramid. I expect to see it much higher than it now is; when I took it in hand, it had been left to run wild, and though then a splendid specimen, nothing compared to its present appearance. This last season it was a mass of flowers from the ground to the top, and was a most gorgeous sight. It is a very old tree. One against a trellis, which has only been planted four years, is twelve feet high, and was it not stopped on account of a *Wistaria* running above it, would grow higher."—*Evesham*.

The wetness of June seems to have been very promotive of vegetable diseases connected with the development of fungi. The *Potato disease* is very virulent upon the leaves in Devonshire, Cheshire, and Hampshire; but we have not heard of any serious attack upon the tubers. If we have a dry August we think the loss will be small. Wherever the haulm is turning yellow we recommend the crop to be taken up, and stored forthwith in a dry shed, and in dry earth, ashes, or sand. We are sorry to find, also, the *Vine mildew* very prevalent in Hampshire.

It appears from the returns prepared by the Board of Trade, that during the five months ended the 5th of June last, we imported no less than 52,338,670 eggs, the whole of which were entered for home consumption. Of these, two-thirds were delivered to supply the London markets. The average monthly consumption of foreign eggs is 15,000,000. We hope to see the day when this importation shall cease, owing to the more general keeping of poultry.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

- AILLENDALE, Sept. 11th. (Secs., G. Dickinson and G. J. French.)
 BATH, Sept. 16th. (Sec. H. T. St. John Mauls, Esq.)
 BRIDGEWATER, Sept. 22. (Secs., Mr. J. Lenker and Mr. J. Hayward.)
 BRISTOL, Sept. 15th. (Sec. Mr. D. Nainby, Jun.)
 BURY ST. EDMUNDS, Sept. 10 (Abbey); Nov. 26 (Chrysanthemums). (Sec. G. P. Clay, Esq.)
 CALLEDONIAN (Inverleith Row), Edinburgh, Aug. 7, Sept. 2, Dec. 2.
 CHELTENHAM, Aug. 20.
 CLAPHAM, Sept. 11.
 COLCHESTER, and EAST ESSEX, Sept. 8, at the Rev. T. Round's grounds, Holly Trees, All Saints.

- DURHAM, Sept. 8.
 FORFARSHIRE (EASTERN), Sept. 15 (Arbroath).
 GLASGOW, Sept. 10.
 HALIFAX, August 18. (Sec. E. Pholman).
 HAMPSHIRE, Sept. 9 (Southampton), Nov. 18 (Winchester). (Sec. Rev. F. Wickham, Winchester.)
 HEXHAM, Sept. 15, 16.
 HULL, Sept. 16.
 KIRKCALDY (Fife-shire), Sept. 9.
 LINCOLN, Sept. 14.
 LIVERPOOL, Sept. 2 (Botanic Garden).
 LONDON FLORICULTURAL (Exeter Hall, Strand), Aug. 10+, 24, Sept. 14, 28, Oct. 12+, Nov. 14, 23, Dec. 14+.
 MANDRILL, In-door Show, Sept. 8. (Sec. Mr. J. G. Smith, West Street.)
 MID CALDER (Parish school-room), Sept. 10.
 NEWBURY, Sept. 3.
 NORTH LONDON, Nov. 23, Chrysanthemum.
 NORTHAMPTON, Sept. 27, Dahlia.
 OXFORDSHIRE (ROYAL), Sept. 23. (Secs., C. Tawney and W. Undershell, Esqrs.)
 PERKESHIRE, Sept. 14th. (Sec., J. Stirling.)
 PONTLAND (Newcastle-upon-Tyne), Sept. 8. (Sec. Rev. J. M. St. Clare Raymond.)
 SOUTH DEVON BOTANICAL AND HORTICULTURAL, Sept. 7. (Sec. J. Cree Hancock, Esq., Stonehouse.)
 SOUTH LONDON (ROYAL), Aug. 10+, Sept. 24, 8, Oct. 14+, Nov. 14, Dec. 14+.
 SHAPLEWELL, Sept. 1.
 SURREY AMATEUR (George Canning, Grove Lane, Camberwell), Sept. 15, Dahlia.
 TROWBRIDGE (Grand Exhibition), Aug. 25.
 TURRIFF, Aug. 6, Sept. 17.
 WHITEHAVEN, Sept. 17, Dahlias.

POULTRY SHOWS.

- BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
 BRISTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Marmont.)
 BURY AND RADCLIFFE (Lancashire), Sept. 3 (Radcliffe).
 CORNWALL (PENANCE), about a week after the Birmingham. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)
 LIVERPOOL, Sept. 23.

† For seedlings only.

STRAWBERRY PLANTING.

WE take blame for not pointing to this important procedure sooner; not that it is too late, but that in order to obtain a *fine* crop the first year the runners should be got out by the middle of July, or sooner, if obtainable. The providing good and early runners is, therefore, no trifling affair; so important, indeed, that the success of the next season is principally dependant upon their quality and earliness. By this, it is plain that it is not wise to leave the production of runners for planting entirely to chance, inasmuch as seasons differ; and in some dry springs and summers, we have shown it difficult to obtain them well rooted until September.

In our younger days, we used to plant detached beds purposely for breeders, so that the kinds being far apart could not by any possibility become introduced; and, after all, there is no better practice. One row was put in the centre of a four-foot bed, the plants six inches apart only; and the side of the bed was cased over in the beginning of April with a good coating of half-decayed mulch for the runners to nestle in. It was the practice to water frequently whilst the runners were extending, through the month of June; and, by such means, abundance of fine runners were, in all seasons, available by the beginning of July. Now, this we recommend to every amateur who loves distinctness in his kinds, and simplicity in practice. It is gratifying to observe how speedily the runners become rooted by contact with the mulch—they are plants directly—and

in removal, a nice little ball adheres to them, of eminent service in giving the young plant a start.

It is the practice, with many, to go over the runners betimes, and to place a stone on each required for new plantations; and a very good plan it is; some, however, go farther, and plunge small pots with prepared compost in them, laying one runner on the surface of each, and placing a stone on the runner to load it. This is, indeed, the highest practice of all, but we fear few find time to carry it out. The plants may thus be planted with nice balls free from all checks. Persons possessing small gardens, and who attend to such minutiae themselves, having little else to engage their time, may carry out such objects in high style; but with gardeners in the country the case is far otherwise. There is so much mowing, sweeping, cropping, kitchen-sawing, fruit-gathering, flower-tying, potting, watering, blight-doctoring, slug-hunting, &c., that the gardener is obliged to adopt what are vulgarly termed, "cut-and-run" plans; and, on the old maxim, "set a thief to catch a thief," a man who has passed his lifetime amid such turmoils is pretty well qualified to advise concerning economy of labour.

It may here be observed, with regard to the *special* bed plan, first described, that, as soon as the runners have extended some three to four feet, the points may be chopped off with the spade; this, by preventing farther extension, strengthens the reserved runners, and enables the planters to get at them without tramping.

Modes of Planting.—Everybody knows that it is very common to hear the exclamation—"My strawberries run too much to leaf." Now, it sounds very well, and looks pretty on paper, to meet with slashing details about plenty of manure, &c.; but those things require some cool discretion in their application. Besides the possible waste of manurial matters, there may come the disappointment—expensive disappointment! We hear talk of market gardeners using so much manure, that, fancying all circumstances alike, folks are but too apt to cause a "run" upon the muck heap, thereby endangering its credit, totally regardless of the sayings of our latter day politicians, that "the cost of production must be lessened." Let it not be supposed that we repudiate the benefit of manure; far from it. We set as high a value on our ordinary manure as anybody, not only for its enriching properties, but for the great value of the organic materials it is capable of imparting to hard tilled and exhausted soils. It so happens, that very little of the power of selection as to soil is left to small gardeners, or we could at once suggest what are the best of all soils for the strawberry. It is well known, that it prefers a loamy soil—a deep, sound, yet mellow upland loam. The majority of soils, however, where the strawberry must be planted, are such as belong to our ordinary kitchen-gardens—a friable, loose, darkish material, which has long since forgotten its origin. A slight amount of adhesiveness we hold to be a benefit to the strawberry, or, to speak guardedly, that character, which in gardening language is termed "sound," in contradiction to a loose, friable, blow-a-way earth. Where soils are of the latter character, means should be taken to alter the example, independent of manurial application. Marl, when it is near, is a capital application for loose and hot soils, and as our COTTAGE GARDENER travels in all directions, and has to advise under almost every existing condition of soil and circumstance, it requires something in the way of advice to carry out its duties and its objects.

We have known loose, black soils, on which strawberry culture had signally failed, made to produce them in abundance by the application of clay marl. It is very probable that chalk, where obtainable, would be beneficial as part dressing; strong loam, also, may be libe-

rally employed; or even clay, if the others cannot be obtained. This advice, of course, applies simply to the correction of the staple for permanent plantations; but what is termed "*the frequent runner system*" is the best policy. We heartily pity those who witness the decline of old plantations, year by year, without an effort to renew their stock. This is a sad waste of land; and when it is taken into consideration how very desirable it is to change the site for crops frequently, in furtherance of a proper rotation, the omission becomes doubly pernicious as to its effects on a gardening system. Of course, in making what is termed a new plantation, to remain three or four years, some manurial matters are necessary, and, above all, deep digging. The soil should be half-a-yard in depth, if possible. Our practice has been to work fresh manures in the lower portion of the trench for durability, and to introduce a more decayed material within a foot of the surface. This "sets the plant on its legs" betimes, and in a twelvemonth's time, the manure becoming somewhat exhausted, the plant is prevented becoming gross. At the period it is most inclined to do so. The amount of manure must, of course, be regulated by the condition of the soil. It is almost needless to observe, that if the staple of the soil is too adhesive, opposite means must be taken to correct its tenacity. Here, sandy materials, old lime rubbish, cinder-ashes, or other burnt materials, sandy heath soil, &c., with the addition of lime, may be called to the aid of the planter. The larger sorts, as the *British Queen*, *Goliath*, *Keen's Seedling*, &c., should be allowed nearly three feet between the rows, and the plants placed one foot apart, with the design of cutting away alternate plants in the second season.

Thus much for the old practice of permanent plantations: we come now to what we consider a superior practice. When we take into consideration the length of time that must elapse from the founding a new plantation in July, to the fruiting of the plants, and the extent of ground occupied, it becomes a question, whether the plants could not be encouraged as mere nursery subjects for a portion of the time, thus enabling the cultivator to work other crops for awhile. Market gardeners may spare their acres for standard plantations, but most small private gardens are of so limited a character, and the demands on them so multifarious, that the occupying even a pole or two of ground from strawberry planting time to November, or February, with young strawberry plants, becomes a serious encroachment on the vegetable cropping. That strawberry-runners, pricked out in the early part of July, on rich soil, in an exposed situation, and removed to their fruiting quarters in the end of October, or even in the early part of the ensuing February, will produce a first-rate crop, we are well assured, having long practised it; and this is the course we recommend to the readers of this work. If the old plantation mode be adopted, every one is tempted to introduce other crops between the rows, "to make the most of the ground," as it is termed; and the mischief that occurs through trampling, &c., is always considerable. Select, then, we say, a funny plot; if a wall-border, so much the better. Make the surface, for six inches in depth, rich with old manurial matters; and prick the young plants out here as a nursery, at about eight or nine inches apart. They must be liberally watered until thoroughly established, and growing strong, and, of course, all weeds kept under; and by the end of October they will be found to be stout, compact plants, with firm buds.

In this practice we lay much stress on the ground being shallow, rich, and fully exposed to the whole day's sun. The shallowness recommended may astonish some; but, in such cases, we must banish prepossessions, and see whether, having chalked out a definite object, the means are really adapted to the end.

in view. And what is the object? Why, to obtain an early, quick-grown, and stout plant, which, by an early cessation of growth, shall organise a plump and well-ripened bud. The three first points are gained by early runners and rich soil; and the latter is induced by shallowness, whereby the plant, having exhausted its rotten manure, and the fibres being in contact with the poor and hard soil beneath, is hastened into a state of partial rest, or, more properly speaking, a high degree of elaboration is induced. This practice, at first adopted as a rational theory, has been amply confirmed in practice, and leaves, in our opinion, nothing to be desired. The very best time to remove these to their final destination is the end of October; and they must be removed carefully, with compact balls of soil, the ground having been duly prepared for their reception. They will lay hold of the new soil immediately, and the slight check experienced, just serves to prevent an undue production of foliage in the ensuing spring.

R. ERRINGTON.

BEDDING GERANIUMS.

I WATCHED at all the London great exhibitions for this useful class of plants, and I saw, on the whole, more than I expected to meet with; some old ones, of which I had no previous opportunity of comparing together, as the different varieties of Geraniums which take after *Lucia rosea*, pleased me much; then the new variegated ones; after them the sport from *Diadematium rubescens*, now called *Wilmore's Surprise*; and lastly, and for some gardens the best of the season, a real scarlet Ivy-leaved Geranium. This new "Ivy-leaf" was exhibited at Chiswick, and at Regent's Park. I did not learn how the judges dealt with it.

Let us take them in the order here set forth—*Princess Alice*, *Hydrangiflora*, *Tom Thumb's Bride*, and *Rosea compacta*, are all varieties from *Lucia rosea*, or from *Mrs. Rodham's Pet*. With the exception of the first, *Princess Alice*, which I received direct from Mr. Ingram, Her Majesty's head gardener at Windsor, who raised it, I did not grow any of those; so that my estimate of their respective merits is taken from the single plants exhibited. *Princess Alice* has the best flower, and comes nearest in leaf to *Lucia rosea*, with a higher and better colour. *Hydrangiflora* had more crusses, and more spreading flowers, but the true and flower were smaller than in the *Princess*; and for a bed, box, or vase, I should say the smaller were the best of the two, because, with the very same habit and style of flowering, I never saw anything come up to *Judy*, treated on Harry Moor's plan. *Tom Thumb's Bride* is third in order for flowers; but they again were more numerous than on either of the others, and as numbers go before quality, with some people, I must leave others to determine which of the three to choose; for my own part, I would grow the three, and throw away *Lucia rosea*, and *Mrs. Rodham's Pet*, a kind which is hardly known about London, but it is as old as *Lucia*, and was first sent out from Gloucester, and it had a prize at Ipswich before *Lucia* got any prize at all. *Rosea compacta* is certainly a very pretty thing; the habit or growth is dwarf, the leaves small, smooth, and shining, like those of some plain scarlet, and the flower is of a deeper red, as in *Lucia rosea*, but without any white. For a low pink bed, if it stands the sun well it will match with the pink Ivy-leaf, and so increase the number of kinds of plants which one can get into an arrangement of beds without increasing the number of colours; and this was always a great point with us at Shrubland Park. Indeed, it often happens, that one has to plant four corner beds, or, at any rate, four beds in some part of a geometric figure, and that they all must be of the same height, and also of the same colour. Then, in-

stead of planting the four with one kind of plant, which is the shortest and easiest way for the gardener, ladies are always more pleased to find four different sorts of the same habit and colour to fill up the bed, and when that cannot be had, they must have them in pairs, two and two. No one, without being cock-eyed, would plant four match beds with three kinds of plants, let them come ever so near in colour and in height. The same rule holds good in the drawing-rooms, when plants are placed there in all parts of the house the same, and also in conservatories. People who take their notions of flowering a house or room from a London route, where plants are "furnished" at so much a score, are satisfied if the house is full of flowers placed anyhow; and it is much about the same in their flower-gardens; but people of taste would often rather go without flowers for a time, than have them placed stupidly about without order or arrangement. These are the readers who value hints about match plants, or beds, or plans of flower-gardens, and for such, *Rosea compacta* will come in useful to match the old Ivy-leaf. It must be recollected, however, that I have had no experience of its growth, and that I may be deceived in it altogether.

Mr. Kinghorn's new variegated Geraniums are certainly very nice things in the flower-garden. The one called *Attraction* is particularly so, and in leaf comes nearest to the *Golden Chain* in interest; between that white and green, in the centre of the leaf, comes a brownish-purple ring, making three distinct colours in each leaf; and if this peculiarity holds on under a full sun, and a free system of bedding growth, this sort will be as much sought after as the *Golden Chain*. I once had the same marking on a seedling, but it would not stand in an open border; and I well recollect having had some cuttings of a variegated geranium from Bath, some of which turned this way while in the cutting pot, and my foreman, Mr. Cole, of Oldford, near Birmingham, had a good laugh at my expense, for believing that two kinds of variegated were sent us; but we both failed in stamping the mark on any of the plants. The marking on *Attraction* seems much better, and looks as if it would stand under all treatment.

Wilmore's Surprise is a very rich and gay bedder. It is the fourth variety we have of the *Diadematium* breed, and is itself a sport from *Diadematium rubescens*. It is the one that was talked of two years since as having been supposed to be a cross between a hollyhock and a geranium. If it flowers as freely as *Diadematium* or *Diadematium rubescens*, it will far surpass all the bedding ones of the race of old ones. The Messrs. Lee, of Hammersmith, had six or seven plants of it at the Regent's Park Show, and they looked all that one could desire. I have also flowered it myself, and it is the same as the one I called *Monstrum*—a name which I must give up—but visitors would not let my poor plants show what they could do, and I know no more of it; but all admirers of the race of bedders ought to have it for next year.

I could not hear to whom the new *Scarlet Ivy-leaf* belonged, but I saw it twice, and there can be no mistake about it; it must be the most valuable seedling, or sport, for the terrace and geometric flower-gardener that has been got these ten years. I heard of it last autumn, but I took it as said to be, from the pink Ivy-leaf, and that I knew could not be, because that is perfectly barren; it is from the other section or species, the one represented by the *Trailling White Ivy-leaf*, and if it runs as much as the white, it will be still more useful. It was called *Fitness Seedling*, or *Fitness Ivy-leaf*, I forget which.

Geraniums, like vines, and many florists' flowers, are so altered by different soils, that what is first-rate in one district, may be not worth growing in some other

localities not far off. A great florist, who planted out nearly five hundred kinds of geraniums, and who gave me a kind invitation to go and see them, writes me this morning, that all the *Fanciers* have so far failed with him, that they will not be fit to be seen before next September. He has them on clay, and he tells me of another great florist who has them in light sandy soil, and they are looking very well; to this I can add my own note, and say, if this light soil was over chalk it would be worse than the clay for them. What the *Fanciers*, and all other delicate geraniums, delight in, is a light, mellow loam, made more sandy, and very rich on the top, so as to give them a start at once, for as sure as they once get stunted by cold, or wet, or bad soil, at first turning out, so sure will they go against you that season. If this kind of soil is on a damp bottom, all the better; but no manure in any form should go much below the very surface for them when the bottom is moist.

It is not very lawful to write about what one sees in a private garden, without consent; anybody may carry and tell tales from a public nursery, but where one's house is one's own castle, one's garden ought to be free from public criticism. But Fellows of the Horticultural Society, and their July visitors, have the privilege, through the kindness of their President, the Duke of Devonshire, to see one of the finest and best kept flower-gardens in the neighbourhood of London; of this I took advantage on the last exhibition day, and to add to my list of newish geraniums, I saw a *Lilac Unique* there, which will be a good acquisition. I saw it also at one of the shows, and I think with Mr. Appleby, except in the flower, there is not the slightest difference between it and the old *Unique*. *Punch*, and *Compactum*, were there; and it struck me at the time, that *Punch* will be a London favourite some day, when Mr. Edmunds shows them in this beautiful garden how to grow it; but if he grows it in pots and vases, it is more than ever could be done by the raiser of it. D. BEATON.

STRAWBERRY PLANTS—PREPARING FOR FORCING.

MANY people resemble the woman with a huge nose who thought that everybody was speaking about her. It is right to be honourably sensitive; of all disagreeables, save me from coming in contact with a *thin-skinned* person. "Think before you speak," is, no doubt, a maxim stamped with ancestral wisdom, but what a bore and a drag to be keeping it in view when enjoying the delights of free, social intercourse. And yet, think a hundred times, and you will not be safe; these thin-skinned gentry will look upon some most innocent remark, either as a personality, or an invasion of their peculiar province. With such worthies for a crew, what an *enviable* position our Captain Editor would have! I have not yet seen Mr. Robson, but I seem to know him so well, as to find no difficulty in believing that in these matters he is as *invulnerable* as the rest of us. In the heading of this article, I seem to skirt that gentleman's domains, and get inside the fence of Friend Errington's preserves. For everything connected with the forcing of the strawberry, I might refer, implicitly, to that friend's directions. What, then, are the reasons for advertising to the matter here? First, because it is so far within my peculiar province, that numbers of enquiries reach me—how strawberries are to be got three weeks or a month earlier in a greenhouse than out-of-doors? and complaints, loud and deep, have come—how that, this season, they have been so disappointed, from the red spider getting on the strawberries, that to save the vines and greenhouse plants they had taken out the strawberries long before they were ripe. And, secondly;

because there are one or two points connected with the treatment of these plants afterwards that deserve to be better known, though I am pretty sure that I alluded to the subject in some periodical years ago.

Before this reaches the reader, it will be too late to begin *preparing plants* for early forcing. I have tried many methods. For general purposes, I prefer laying a runner in a small pot, cutting it off when rooted, and then transferring into what is called a 32 or six-inch pot. I think by this means the ball of earth is more thoroughly filled with roots than when the young plant is layed, or planted, in a six-inch pot at once, in which case the outside of the ball is the densest with roots. For very early work, I prefer five-inch pots. I would here, however, refer to the directions of Mr. Errington, and others. It is not too late to prepare plants, when it is intended to put them in the greenhouse by the middle or end of March. It would hardly be worth while to go through the process of layering, as in going along the beds you will find nice-rooted young plants, which might be potted in six-inch pots at once, or into 32-inch or four-inch, to be again transferred to a six-inch pot. The six-inch I prefer for common fruiting purposes, with one plant in each. When at first, or ultimately put in the fruiting-pots, the following trifling matters are essential to ultimate success:—

1. The soil should be rich, open, and fresh, partaking of a loamy character.
2. The bud, or crown, of the plant should stand well up in the centre, and rather above the rim of the pot, as it will be sure to sink.
3. The soil must be put carefully among the roots, and it can scarcely be pressed too firm, if in the medium state of being neither wet nor dry.
4. The plants should be shaded a little first, until growth is freely proceeding, and then placed right in the sun, and on a hard bottom.
5. Soot, or any other manure water, alternately with clean water, may be given until the middle of October.
6. Then, in wet weather, the pots should be laid on their sides, and only set up when the weather is fine and sunny, and no water given unless the leaves flag.
7. In November, the plants may be put in their winter quarters, plunged among anti-worm materials in a border, to be protected from heavy rains or severe frosts—built in ridges to be so protected—or, what is better than all, plunged in a pit, with either a glass or waterproof covering over them at will.
8. When placed on a shelf, near the glass in the greenhouse, in the end of March, or beginning of April, so that they do not wait for water, but use it rather sparingly before the flower-trusses show themselves; then give manure waterings, syringing with clear soot-water repeatedly, and if a trace of spider appears, use the hydro-sulphuret of lime.
9. The best sort for such use is the *Keen's Seedling*; the earliest, and yet good, the *Black Prince*; the finest fruit, but later than both, the *British Queen*.

"Well what a trouble, and about a few strawberries!" Aye, so it is. Some consider it a misfortune. I hold it to be the very reverse; that what is worth having, costs trouble and labour. "But is there no made-easy mode for getting these strawberries earlier than out-of-doors, and with less labour than a whole summer's attention?" Oh many! I will instance two. First, instead of potting, plant out the young plants on a south border, made rich and well dug, and from six to nine inches apart. Give them plenty of rich watering, keep them free from weeds and runners, and stick a few branches among them during winter. In the first days of March, take up the plants with large balls, and pot them firmly. Previously to that, from the stable, cow-house, and poultry-yard, and sweepings and prunings from this lawn and shrubbery, construct a rough, slight hot-bed, that will maintain a bottom-heat temperature of from 60° to 70° for a fortnight. In this bed plunge the pots, set a frame over them, but with air on back and front; the object being

not to excite the buds, but to fill the pots with roots by the time the extra heat is gone; then the plants will receive no check in being moved to the shelf in the greenhouse. "But why not leave the plants in the frame?" Because, if you did so, you must thin them to something like a foot apart; because even then they would not be so well supplied with light as in an airy greenhouse; and because, finally, if you left the pots without placing them on some hard substance to prevent the roots going freely into the dung, you are likely to be rewarded with better leaves than fruit.

But the second mode is more simple still, on a similar border, or on a steep, sloping bank. Put out your young plants a foot apart; attend them carefully; protect a little during winter; and in March and April cover them with shallow boxes and glass sashes. In ordinary seasons you will forward the fruit a fortnight; in dull weather they will scarcely be forwarded a week; in bright sun, after flowering, they will precede those in the open air nearly three weeks.

But now, *secondly*, supposing that we grow the plants in pots, what is to be done with them afterwards? Throw them away? No; that used to be the custom; gardeners know better now. It is now getting common to plant them out carefully, and here, as in a lady's postscript, is the gist of my article. What are the objects? First, to obtain from early-forced ones a second crop in September, or towards the end of August. This I have done for more than a dozen of years. I question if I shall not be disappointed this season. Contrary to usual custom, owing, I suppose, to the heat and dryness of June, the plants which bore a heavy crop in March are now again in full bearing, and I have been picking eight days before this (26th July), when they were of little or no use to me; others, however, keep throwing up buds. Now, as respects this second crop, I never got much from plants turned out as late as June; and that would be the case with most of our greenhouse friends, and yet to them I would also say, plant out your plants carefully; and my reason,

Secondly is, *That these plants will produce more abundantly*, in the open air, next season, than any other young or old plants treated in other respects in a similar manner. I have proved the matter for years, and demonstrated the fact to hundreds. It seems to make little or no difference whether the plants fruit in the autumn or not. My common Koen's Seedling have been fair. Those under the treatment, in *greenhouses*. The theory of the thing I will not now enter upon, as when the matter was mentioned in conclave there seemed to be diversity of opinion. Of the fact itself, there can be none, especially in all soils that are stiff and cold. It applies to all kinds, early and late—early forced, or merely forwarded in greenhouses. Many adopt the system now as a mere matter of routine. I lately met Mr. Judd, whose Queens—so much admired at Chiswick, in May—had, a few days previously, taken off the honours at Northampton, and his practice entirely coincides. He told me that in his cold ground he could do no good with British Queens, Alice Maids, &c., from planting young plants, but that his turned-out forced ones did well.

One word more. Such plants do not continue to be prolific. I have had them good for several years, by extra care in thinning and surface dressing, but in general they do splendidly the first year; fairly the second; and but so-so the third. Where room is scanty, they should never stand above the second year; for a splendid effect, never after the first summer. I trust that our friends in future, who place thirty or forty pots in their greenhouse oven, will give each plant, when gone fruiting, a space of fifteen or eighteen inches square in good ground.

R. FISH.

LYCOPODIUMS.

"There is no plant without its use," is an old proverb, and it is true if applied to the family we are about to write upon, namely, those moss-like plants congregated together under the above name. Mr. Fish indulged us lately with a very pleasant paper upon "What's in a name?" He instanced two, that made the plants bearing them popular at once—the *Flower of the Day* and the *Mountain of Light*, and now we can add two others, the *Silver King* and *Attraction*. These, as our friend Mr. Beaton well knows, are only striped-leaved geraniums, but their names are dispersed, through the pages of THE COTTAGE GARDENER, we might almost say round the world, at least wherever lovers of plants live and cultivate "the stars of the earth." Now, if the short-lived plants bearing these pleasant names are rendered attractive thereby, we may claim the same attraction for the *Lycopodiums*. It is true, some of our, perhaps, more learned than wise botanists have attempted to change it to *Selaginella*, but we think the first name has a hold too firm upon the plant-growing public to be changed hastily. We remember the late Mr. Loudon put all his gigantic power forth to change the name of *Dahlia* to *Georgina*, but the first name was so established in the public mind that the attempt proved a failure; the genus remains *Dahlia*, and will do so to the end of time, and so we opine will the name of *Lycopodium*.

We commenced with stating that there is no plant without its use, and we must try to prove the use to which these pretty plants, the *Lycopodiums*, may be put. And here we must confess that their usefulness as an article of food, or as medicinal plants, is very doubtful, but it is as ornamental plants that we claim for them a place in every greenhouse and stove, or even on shady rock work in the open air, for the species belonging to the genus are widely spread on the face of the earth. Some are natives of the heath-clad moors of Britain; others inhabit the Swiss mountains; whilst a third group are found in the shady woods of that far-off country, China; but the greater part are natives of the hot climates of the Brazils, Java, Borneo, and Singapore. From these hot countries collectors have sent them to Europe, either purposely or accidentally, as package for more valuable plants; by these means the species have been multiplied to a considerable extent, and they are cultivated with such success, and are considered so interesting and beautiful, that the Metropolitan Societies give prizes to collections of them, though not obliged to do so by the schedules, in many instances.

As matters of ornament, they may be grown in various ways, but the principal mode is in pots, to be placed in situations where nothing but their relatives, the true ferns, would exist, or at least thrive. Then, again, as plants to be cultivated in fancy baskets, there are none that fill such a situation with better effect; though they do not produce flowers, yet the pleasing green of their foliage and stems, and their pliability, which enables one to peg them down and train them in any direction, render them pleasing objects for the eye, wearied with glaring colours, to rest upon. Then, again, as plants for the Warian Case, or parlour greenhouse, as it may be termed, there are none that exist longer in it, or are more beautiful. In all these ways we have grown them to our entire satisfaction. All the exotic species love to grow best in the shade, and, therefore, if in pots, they may be placed underneath other tall-growing flowering plants, and are very useful there to hide the pots, or the soil, or even the platform and stage.

There are two species, or, rather, perhaps, one species and a variety of it, that lose their principal beauty if placed in the full light. We allude to the *Lycopodium obscurum* and the *Lycopodium obscurum arborescens*; in deep

shade, the foliage of these two plants is of a brilliant greyish blue, with almost a metallic lustre, which gives them a most pleasing appearance; but this lustre soon disappears if the plants are removed into a strong light, or exposed for a few hours to the rays of a bright summer's sun; they then turn a common green, and if continued in this, to them, excessive light, they become quite brown, appearing to be scorched.

The finest colour we ever observed was in the stove propagating house at Pine-Apple Place. In this house they were, whilst young, kept densely shaded, and this shade brought out the splendid colour to the highest perfection, creating the greatest admiration in every visitor; indeed, so attractive were they, that very few went away without purchasing one if they possessed a stove to grow them in. The highest colour was upon the arborescent variety, though the dwarf one, in such a situation, was rich in colour, but not quite so bright. The tree *Lycopod* grows in a stove to an enormous size; we had one lately that was twelve feet high, and thickly clothed with branches and foliage down to the edge of the pot, but it attained such a size that we were obliged, for want of room, to cast it away.

Some growers of orchids plant dwarf, trailing *Lycopods* upon the baskets containing *Stanhopes*, and other basket-loving epiphytes, and say that they are useful as indicators when the orchids require water—in that respect acting as hygrometers. There is another use to which these flowerless, but beautifully green, plants may be applied; they not only act as indicators, but as shade-giving plants, sheltering, by their green foliage, the young and tender roots from the light.

T. APPLEY.

(To be continued.)

CULTURE OF THE ROSE FOR EXHIBITION.

(Continued from page 259.)

Raising New Varieties from Seed.—In our last paper on this interesting subject it was mentioned, that the cultivators of the rose are chiefly obliged to the French for raising new varieties, and also that they might be raised from seed equally as well in this country, by saving seed from the best formed flowers, with fine foliage, free habit of growth, and abundant bloom, and a few hints were given on hybridizing, so as to improve the breed and produce better varieties. Now, as many of the best hybrid perpetuals will still be in bloom, it is a good time for the delightful employment to be forthwith proceeded in. Remember what was said about expecting seed only from flowers not perfectly double, and look diligently for the parts in the flowers operated upon for pollen and stigmas. In order to understand what we mean, examine a single rose; in it you will find a number of small threads, and a kind of knob on the top of each thread or stamen. These knobs, or anthers, when fully mature, open or burst, and a fine powder may be perceived inside; this is the pollen, or fertilizing dust: without these appendages, and the dust or pollen, there will be no seed or fruit. Then look again, and you will see in the centre of the flower, in the midst of the stamens, another thread, bearing a different shaped head or knob; this is covered with a glutinous matter, and upon this the pollen dust falls and fertilizes the seed, giving it life. This organ is equally as needful to produce a living and growing seed as the pollen dust. All flowers, then, intended to be hybridized, should have the central filament, with the stigma on it, perfect: the pollen might be supplied from other plants. To effectuate a new variety with greater certainty, the anthers on the flowers intended for improvement should be removed entirely, and pollen brought and scattered upon the stigma from some other flower,

that has some desirable property the one to produce the seed may be deficient in. We will give an instance; that fine, high-coloured rose, the *Géant des Batailles*, is not a perfectly-formed flower, it is deficient in the centre. Now it is very desirable to keep the beautiful rich colour, therefore it is not wisdom to use pollen from a paler rose, such for instance as *Camp d'Hebe*, though this is, perhaps, the most double and fullest of well-formed petals of any rose we know; no, we must look for it on some rich, dark, well-formed, and full-petalled variety; *Paul Férar*, or *Ohl*, would answer, and both are full, well-formed roses; or one we noted at Chiswick would answer the purpose, it was named *Pandéul*. This example will at once be understood by any rose-grower, and be acted upon; for it is a self-evident fact, that to achieve an improvement in one quality, we may, if we use improper means, defeat the proposed end. Let those of our readers, then, that may try to improve the varieties of the rose, take care not to make use of such as are widely different in colour. It is true, striped roses might be obtained, but we consider variation as not a desirable property. *Sells*, that is, roses of one full, clear, and distinct colour, are much more beautiful, always most admired, and, in consequence, the most highly valued; let, therefore, a dark rose be fertilized by the pollen from another one of nearly the same colour. A white rose will, of course, be done so, and so should a blush, or, what is called emphatically, a rose-colour, and, above all, the yellow varieties. In this last colour there is particularly a wide scope for improvement. The best yellow is the *Persian briar*, but it is only a little more than a semi-double rose. It is very likely, on that account, to produce seed, but we know of no rose of the same colour, or approaching it, that would be likely to improve it. *Viscountess des Uzès* comes the nearest in colour, but it is a different species entirely. Then the *Old Yellow* rose, so difficult to flower, is also another distinct species, as is also the *Cloth of Gold*. Yet, as a good full yellow rose is a great desideratum, it is desirable to try them all upon this fine truly golden-yellow one, the *Persian*. The *Bourbons* have hybridised with the *Chinese* varieties; and, reasoning by analogy, why should not these yellow varieties, or species? At all events, it is worth the trial. Whether it succeeds or not, save seed from the *Persian Yellow*, even if it is set with its own pollen. By high cultivation, and successive generations, some of our young readers may accomplish that desirable end—the production of a full, double, large, and well-formed perfectly yellow rose of the *Persian* breed.

Our second recommendation is—to save seed from such only as bloom early enough to ripen it thoroughly. This is a self-evident rule, for unless the seed be ripe it will not grow. Now, the rose fruit, or hip, takes full three months from the opening of the flower to ripen it; but it will ripen in the cold days of October, November, or even December, provided no severe frost takes place previously. In proof of this, we need only point to our hedge-rows, where the scarlet hips of the wild rose show their full bright colour during the last months of the year, supplying food to the feathered tribe through the winter season. And here we would remind the aspiring raiser of new roses to beware of the birds, and protect his choice impregnated hips from their depredations. The safest way is to gather them as soon as they are ripe, or if the birds attack them before they are fully ripe, let them be protected with small bags made of muslin netting, such as will not prevent them perfecting the process of ripening.

T. APPLEY.

(To be continued.)

BEGINNING OF THE KITCHEN-GARDEN YEAR.

ALTHOUGH it is improper to say that this month begins another year, as is often remarked in gardening phraseology, because operations bearing on another year, as well as the current season, have been long ago performed—yet it may be admitted, that most of what is now sown or planted is done with the expectation of their coming into use next year; so that, although the weather may give no tokens of it, we are now entering on the autumn of the gardening world; and our floricultural friends will fully bear us out in that view, since they are accustomed to call all plants propagated after July, “Autumn struck.” But, as we have an accumulation of work to perform this week, we must leave our brethren of the parterre and hothouse and, with spade and rake in hand, see what wants doing in the kitchen-garden way.

As we last week urged on our young friends to bestir themselves, and get a bed or two of some of the best winter *Cabbage* sown, we can only repeat the same charge now, and supposing that to have been done the day our work was published, then, in eight or ten days after, a few more may be sown, taking care, at the same time, that the first lot be properly attended to. Now, this is quite as important an affair as committing the seed to the ground, because it often happens to be so dry, and the ground at times unkind, that unless some degree of attention be paid to the newly-sown beds, the seed might as well have been sown upon a turnpike road. Presuming the ground to have been dry, and exposed to the action of the sun a week or fortnight, it will most likely be a collection of hard-baked clods at top. This will more especially be the case if it be stiff and retentive. However, as the time has arrived for sowing it, compulsory means must be adopted to make it fine; beating it with the back of the spade will break a part, after which a gentle watering, and a little coating of leaf mould, made very fine, will enable the teeth of the rake to find their way through, and separate the lumps left unbroken by the spade, while the intermixture of this leafy mould, or some similar matter, will prevent the soil running into such a hardened mass again; while at the same time it must be confessed, that if used in too great a quantity, and the seed sown on it without any after care, or shade, it is ten to one but the hot, dry weather either scorches up the young seedlings, or prevents the seed vegetating at all. The reason is obvious; the leaf mould does not all at once blend with the soil, the mixture being more mechanical than chemical, the affinity being a work of time, not of the moment. However, as it is equally grateful to the young plant when kept moist, we advise its being used, and after the seed is sown let it be at once well watered and shaded, and we have no doubt of the result, if some after-watering be also attended to, and accidents guarded against. As a very homely way, we usually sow our beds on this plan, and spreading a few pea stakes over them, which at this time become plentiful, either mats are thrown over the stakes, or, what is more common, a little of the best harvested pea haulm, as free as possible from leaves, is scattered over it; this homely plan serves the purpose very well, and under such a covering, *Cabbage*, *Cauliflower*, *Lettuce*, *Endive*, &c., vegetate in hot, dry weather, with a regularity not common even in a favourable atmosphere. Care is taken to remove this shading piecemeal, or in dull weather, while the plants are very young, and unhurt by its drawing influences. The kinds of *Cabbage* to be sown and planted first are some of the small hardy sorts, of which the old early York was the type—a kind having the good property of withstanding the severities of the winter when of a good

size, and not running to seed in spring, is the most suitable for the first crop—larger and finer kinds might follow. Of *Lettuce*, the *Hardy Hammersmith*, *Brown Coss*, and *Brown Dutch* are the best, especially the first-named, while the *Batavian* *Endive* is more hardy than the white or green curled. It is too early to sow *Cauliflower* yet. We usually sow ours about the first of September, but adopt then the same plan of shading, &c., as we now recommend, if the weather be such as to require it.

Celery must now be planted out for a late crop; but for the latest of all, the middle of the month will be in good time. It will be advisable now to look round and plant every spare corner with such kinds of *Broccoli* as will come into use before the time the ground is wanted again for other crops. The *Walcheen* is invaluable that way, and a large breadth of it ought to be planted at once, to follow that planted last month; at the same time, not forgetting to plant some of the hardier kinds pretty freely as well, lest the winter turn out more severe than of late years. The *Danish*, *Sprouling*, and *Dwarf Russian*, are more hardy than those partaking of the *Cauliflower* breed.

Plant, also, any spare *Greens* to come into use early in spring; if put in rather thickly they are sure to become serviceable when spring sets in, and, occupying little ground, are as profitable as anything else. *Cabbages* planted thickly are invaluable that way; in fact, as all summer crops are now either clearing off or about doing so, consider well what can best be done to make the ground productive in the winter months. *Spinach* will have to be sown by-and-by, and *Cabbages*, &c., planted, but then other crops will be coming up to make way for these.

Break down the necks of *Onions* if they seem to prolong their growing season to an undue period, and when ripe, which is easily known by their dead tops and loose roots, let them be drawn, and after lying awhile to harvest, be carried in, sorted, and put away; the latter jobs, however, may be put off until a wet day.

Potatoes, as they ripen, may also be taken up. It rarely happens that *Potatoes* in a garden are allowed to remain in the ground after being fit to take up, the demand on the ground for other crops being such as often hastens their removal before they are perfectly ready. However, those intended for seed ought to have every chance to perfect their growth, without which we fear next year's crop will be in jeopardy of falling a victim to that disease, which, we are sorry to hear, is more prevalent this season than the last one.

When *American*, or *Golden Cress*, is required as an adjunct to the salad bowl, it is now time to sow it, and be sure not to forget to thin it in time. *Radishes* might also be sown on some cool, shady border, if sufficiently moist; the Turnip-rooted kinds are most suitable now, but it is too soon yet to sow the principal crop for autumn and early winter use. A few *Onions* may also be sown for drawing young, but the crop to stand the winter ought not to be sown before the middle of the month, and a few *Carrots* a week or so later, only we confess we have little faith in their utility, as they generally run to seed early in spring. Dung, and other materials, must also be collected for *Mushrooms*; and, in fact, everything connected with the ensuing season kept in mind, so that at the fitting moment whatever may be required may be forthcoming.

J. RONSON.

THE CUTTING DOWN.

By the Editor of “The Cottage Lamp.”

WE cannot be too often reminded—surely, we cannot be too often reminded, among our pleasures and our joys—that we must all die. Those to whom such a subject is unplea-

man will not read my writing, for I have touched largely upon it; and the only recommendation to notice which my pen can claim is, that it has ever spoken truth. To those who feel no gloom or sadness in looking death in the face, I must add another affecting proof that every man shall die, "and his name perish."

I was pondering last night very much upon my paper of to-day; I did not seem possessed of a subject. I was fearful that I should make "a poor hand of it," and disappoint the Editor. How little I thought that a subject was then awaiting me, and one that would cost me sorrow too!

This morning, at breakfast, a kind and anxious young medical man called and requested to see my sister. On returning to the room, he brought the intelligence that John F——, a man who had worked on the property over since he was a youth, was lying on his death-bed. He was a woodman, skilled in the measurement, and management of timber, who has for years been "ranger" of our "woods and forests," in their simplicity; and who knew the face of every tree upon the property. But a very few days ago, I think only this day week, we saw him, in his usual health and spirits, wending his way home, with the customary "niche" upon his back, little thinking—too little thinking—of the summons so near at hand. He was labouring for the meat that perishes; but as to the bags which neither moth nor rust corrupt, they were lying empty and utterly neglected. Only two days ago, he was speaking of coming down to the house for orders—the very day on which he was taken ill; but another order awaited him—one which was stern, and must be obeyed at once; from which there was no appeal. Hezekiah was commanded to set his house in order, "for thou shalt die, and not live;" but poor John was not given time to make his paths straight; he was laid at once upon a bed of suffering, and his recovery is said to be hopeless. Unless the Lord gives the word, his departure is immediate.

As we approached the abode of sickness there seemed an unusual stillness there. The cottage is one of three little tenements beneath one roof, and the whole of them are covered with roses, and surrounded by neat and well-cultivated gardens, orchards, and trees. They nestle in a picturesque dell, and are quiet and secluded from the bustle and noise of busy life. Poor John's garden was always fruitful and early; well-stocked, and well-managed. He has a row of bee-hives, under a sheltering box hedge, and there they were this morning, buzzing about as if nothing was the matter. He has had much trouble with them this summer; they swarmed, and went back again; then they hurried out, day after day, keeping him in perpetual uncertainty—but now all is over. How soon do our earthly cares and pleasures cease, and seem as if they had never been.

John has survived his wife three or four years. They never had a family; and an aged brother and sister alone remain to mourn for him. He has lived alone, with a large black cat, the pet of his wife, ever since she was taken from him; but he has kind and attentive neighbours, and his poor old sister sits by him. When we saw him, he was sensible, but could say little. The very great heat oppresses him, and he is to be kept "very quiet." Alas! what a time for the work of works to be begun and finished! What a time for a "sleeper" to arise, and call upon his God! Sabbath neglected and desecrated—the laws of God broken and disregarded—the Saviour unheeded and unknown—death unprepared for! What a time to face all these terrors, and plead with God, "if so be that God will think upon us, that we perish not." A Christian man must feel deep awe when the last summons comes, particularly if it is quick and peremptory; what shall he feel who has no sure hope in his God?

John has some worldly business that ought to be attended to. He has other persons' accounts in his head, for he cannot write or cipher; but he cannot talk or think of them, though we know it gives him uneasiness. How, then, can he wrestle with Him whose strength "is as it were the strength of an unicorn?" A death-bed is no place in which to repent. Even supposing we are enabled to collect our thoughts, and have time given us to do so, we cannot tell whether it is godly sorrow, or slavish fear, that leads us to cry mightily to God. Many and many a sick penitent has come forth from his chamber, and returned to his wallowing in

the mire. Let us not deceive ourselves in this matter; the day will come when we shall look back to these precious hours of health, wasted and mispent, with hopeless agony. We shall then think nothing of our gardens, our bees, our poultry, our pleasantest worldly concerns, except to cry, "All these things I might have done, and yet not have left the other undone."

Since I wrote the last paragraph, we have again seen poor John. The languid eye lighted, and the horny hand, that has for so many years laboured in our service, was stretched out feebly to meet ours. He could only gasp a few words with difficulty; but some of those few cheered us. To a searching question, he sobbed out—"I have been thinking of these things for a good while. I found I was not in the right way. The soul is of a deal more account than the body." He could say scarcely anything more; but the eyes moistened, and the weary head moved, as if he felt the power and sweetness of "the Word," as it met his ear. There is no other word that can give comfort in the dark valley—no other pillow to rest the soul—no other "water" that can calm the fevered mind. The parched lips may be refreshed with the cool draught, but they will "thirst again." "But if any man drink of the water" that Jesus Christ will give him, "he shall never thirst again," but be satisfied with the sweetness of that draught for ever and ever!

Before these lines go to press the earth will have rattled upon the coffin of poor John—another cottage gardener. May it sound in the ears of many who dwell far from his secluded grave! May it call to them loudly to "remember their Creator in the days of their youth," their health, their prosperity! We must all die: it is a solemn thought. But we may not all be ready: this is more solemn—more terrible still. Oh! let us set our houses in order now. Let us make up our accounts with God now. Let us be as servants, ready and waiting for our Lord. We shall enjoy our gardens, and bees, and home pleasures, ten thousand times more than we have ever yet done, when our great spiritual account has been crossed out by Jesus Christ—when there is "no handwriting against us"—when he has whispered clearly to our heart, "Thy sins be forgiven thee; go in peace."

"Man cometh forth as a flower, and is cut down." Let us all remember the cutting down of poor John F——, the woodman and cottage gardener!

ESTIMATE OF POULTRY VARIETIES.

A POULTRY FANCIER myself, I look out (always with interest) for the remarks in *THE COTTAGE GARDENER*, made by your various correspondents—"Amster Bonn," "Q in a Corner," "A Subscriber," &c., &c.

In the multitude of counsellors there is wisdom, and therefore, though my experience does not lead me to the same results with them, as to the relative merits of poultry. I am indeed, as a large poultry-breeder, and a not unsuccessful exhibitor, to send you my opinions, in case you like to publish them in your excellent periodical.

I am lucky enough to possess a good many walks, so that I have been able to keep apart, at one time, Cochins-Chinas, White-faced Spanish, Minorcas, Grey and Spangled Dorkings, Bolton Greys, or Every-day Layers, and Polish. Of all these I have endeavoured to secure the best blood.

I find *Cochins* very good layers, but their eggs are very small; and though mine have laid more eggs in the year than my Spanish, it has not been in the proportion I expected, considering the size of the eggs, and the great quantity of food consumed by the Cochins-Chinas. My man's remark to me yesterday was—"Why, sir, two of those fowls eat as much as a pig;" and, allowing for a little exaggeration, he is not far wrong. They are good nurses, well suited, from their tameness, to be kept in confined places; but, from their great voracity, I do not consider them "paying poultry" to a cottager. As a bird for the table, their great heavy legs are sadly against them, and I should call their flesh "coarse and stringy." I have got a few chickens crossed between Cochins-China and Dorking, which promise to be very good table fowls.

Of *Spanish*, I have got nearly the best in England (I believe), and, as layers, I cannot speak too highly of them. I think I am safe in saying that since February last my

hens have given me six eggs each weekly. My eggs have varied in weight from three to four ounces each, and (I cannot agree with "Subscriber") not inferior in flavour to Polish, or any other poultry. They are bad, uncertain nurses; and, though their flesh is very good indeed, they are not favourites in the kitchen, from their dark legs. The cooks call them "crows." Though the white-faced Spanish are considered more valuable than the *Minorca*, and command the prizes at an exhibition, I am inclined to think the *Minorcas* lay as large eggs as the white-faced, though, as is usual (with ladies especially), looks go for something, and the latter are very much handsomer.

Of *Dorkings* one cannot speak too highly: they are fair layers, good nurses, and capital as table fowls, but I do not think their eggs are as highly flavoured as Spanish, *Came*, or Polish, and I could wish them a little larger. I had a cross-bred *Dorking* and Spanish hen *neg*, who was first-rate.

Bolt Greys are certainly good layers, but they disappointed me; their eggs are small; and from their love of rambling, especially in the neighbourhood of plantations, however highly fed, one loses many eggs. They are bad nurses. Though small, they are very good to eat.

Of *Polish* I need say little, after "Subscriber's" remarks, with which I generally, though not entirely, agree. I admire them as much as he does. I think them excellent layers, though not better than the Spanish, and much smaller eggs; but in the north, where I reside, I have found them (and I may add white *Dorkings*) rather delicate. This may be local, however. We are on cold clay; but I have had no difficulty in rearing Spanish chickens, of which I have now 136, having only lost five this year.

The conclusion to which I have come is, that the two breeds most desirable for the cottager or farmer to keep, whose object is "good returns," or for the amateur who wants good supplies, are Spanish and *Dorking*. I have given a fair trial to *Cochin-Chinas*, having got the best birds I could buy; I own I am disappointed with them; and I strongly suspect (however much I may incur the indignation of "Anster Bonn" and your other correspondents, by such an idea) that the time is not far distant when others will come to this opinion, and that we shall find that the mania for *Cochin-China* fowls is on the decline.—GALLUS.

THE BEE SEASON.

I AM now looking with interest for reports, from different counties, of the present Bee season. I am sorry to say that here (West Somerset) our bees have had a wretched harvest nearly throughout our best months, May and June, and, until this fine weather set in, the swarms could scarcely keep themselves; they have gained weight since then, notwithstanding it is July. The old stocks that have swarmed are much in the same plight; and those that have not swarmed, which ought to have produced a box or two of honey, have not much more than they will require for winter store. I have not taken a pound of honey this season, but last year by this time (July 13) I had taken above two hundred-weight in glasses and boxes. We had a most excellent season last year in this locality; I took from one stock, last year, a box containing seventy-eight pounds of pure virgin comb, all made in about seven weeks, and left plenty for winter store. This was on the storifying system, which I have adopted, after trying different plans. I now use boxes, which I have been improving for some years, and have now so constructed as to be able to give the bees one or two boxes, or one, two, three, or four glasses at pleasure, with very simple management. I have this season reduced the depth of my boxes, from suggestions I read in *THE COTTAGE GARDENER*, and I think with great advantage.

Your correspondent, "Doncaster," in May 20th number, expressed his fears of the recommendation to remove the old stock and put the new swarm in its place, but I can assure him it is a safe practice; I generally do it, and to advantage, and I only remove the old stock a few yards, where I happen to have a vacancy.—J. W.

COCHIN-CHINA FOWLS: THE LOVEL BREED.

THE Lovel breed of *Cochin-China* fowls (so called from having been imported by Captain Lovel) is said to be one of the purest stocks in the country. They are very much celebrated for compact beauty of shape and delicacy of fluff. They are good in colour, handsome in the head, abundantly booted, and particularly well-formed and full about the breast, but are not famous for great size.

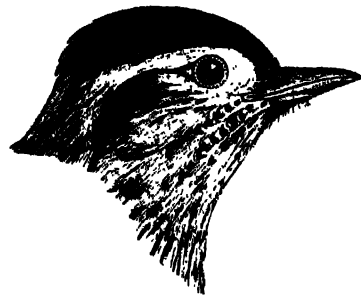
A Lovel cock, which I think myself fortunate in possessing, has this year been mated with some large imported hens, and I have every reason to expect, from the present appearance of the chickens, that this little deficiency in size of the Lovel breed will be corrected in them.—ANSTER, BONN.

BRITISH SONG BIRDS.

(Continued from page 246.)

THE WOODLARK.

(SENSORES CINTROSTRES. ALAUDINÆ.)



THE Woodlark is by no means so abundantly distributed, nor so well known, as the Skylark; for, indeed, in some localities it is scarcely or never seen; nevertheless, its sweetly varied and melodious strains have rendered it desirable by most people. In its habits, it differs from its companion, the Skylark, in singing while perched on the branch of a tree, which the other does not; though generally its song is poured forth high in the air, and often unseen while suspended on the wing. Its song is considered to have less variety and power than the Skylark's, but, on the other hand, it is of superior quality in tone and sweetness; and from its mellifluous, soft, and flute-like notes, is preferred by many persons. In its natural, or wild state, it may be observed taking its flight high in the air, describing circles as it rises, and gradually enlarging those circles as it ascends; and while performing these spiral whirls, uttering forth its plaintive sweet song by the half-hour together; on descending from its "giddy height," it performs the same circular route, sagging all the while, its cadences of song decreasing as it lowers itself to the earth, or branch of a tree. In this it differs again widely from the Skylark, whose uprising is in a more direct manner, while its descent to the earth is almost perpendicular, as if it fell by its own gravity, and is altogether silent during that descent. The food of the Woodlark, in its wild state, consists mostly of insects, worms, seeds, and grain. It may be readily kept in confinement if caught wild, placed in a cage whose top is covered with cloth or baize, to prevent the bird injuring itself by its attempts at escape upwards. A few worms, insects, crushed (not pounded) hempseed, or wheat, or embers groats, thrown into the bottom of the cage, it will readily, when impelled by hunger, pick up; but it is well to place the cage in some corner where the bird may be left quiet and unobserved, as it is exceedingly shy and wild when first taken; but left to itself, it sooner becomes reconciled to captivity. It should be supplied with water in the cage in a shallow pan, which pan I usually cover with wirework, in order that the bird should not run into it and splash itself, which it would do in its endeavour to escape, and would become dirty from the sand, or other matter, with which the bottom of its cage was strewed, adhering to its wetted plumage; for this, like the Skylark, is a "duster," and not a "washer," and, therefore, would not readily disengage itself from the sticky mass.

adhering to it, and would die literally of dirt. It may be easily reared from the nest in the same manner as the Skylark, which I need not repeat; but the *grand secret* to keep the Woodlark in health, and in fact, most granivorous birds, but particularly the Woodlark, is to strew the bottom of the cage with old mortar, powdered roughly, so that the pieces be as large as ordinary shot; these it greedily picks up, and devours in large quantities, and are most essential to its welfare. I have noticed, while their pans have been filled with ordinary food, if there was no mortar in the cage before, the instant the powdered mortar was put into the bottom of the cage, the birds began swallowing several pieces, no doubt these act by way of tituration in their gizzards, and render their food digestible; be this, however, as it may, they die without it. A tuft of grass, by way of a small turf, is exceedingly desirable, as these birds, like the Skylark, partake of green food occasionally.—W. RAYNER.

NOTES ON VEGETABLES AND NEW VARIETIES.

(Continued from page 293.)

PARSLEY.—This is an excellent herb to grow in the cottager's garden, as it improves so many dishes. The *Extra fine Curled* is certainly the best sort, but I bought a new sort I saw advertised in *THE COTTAGE GARDENER* last season, by Mr. Duncan Hairs, called the *New French Fringed*; it is a very excellent variety, and appears to be much hardier than the common curled species. It seemed to be growing all through the winter, and it must be very valuable to gardeners, who use much of this herb for garnishing, &c.

PEAS.—New sorts are coming out every season, almost every seedsman having a new variety to offer, but I am sorry to say, that in nearly all instances they are identical with the sorts which I have grown before. I bought, last season, nearly every one I saw advertised, but found that in many instances they were all one sort, at least, I could perceive no difference in them. I sowed some of each of about a dozen sorts of *Early Peas*, many having new and high-sounding names. Among the dwarfs there was one variety that certainly deserves notice, as it is a different and a good variety:—*Bishop's New Longpod*; it is a variety of *Bishop's Dwarf*, but much better. I sowed the *Morning Star*, *Prince Albert*, *Early Warwick*, and *Ward's Early Conqueror*, the last week in January, two rows of each variety, and I found that *Ward's Conqueror* was the earliest of them all, and was fit to gather six days before either of the other sorts, though sown the same day. *Fairbeard's Champion of England* is a very good pea, and is the earliest of the wrinkled marrows. *Burbidge's Eclipse* and *Stubbs's Dwarf Marrow* proved both one sort, but it is a good, useful pea for small gardens, and grows only three feet high. *Hair's Dwarf Mammoth* is also a very good dwarf pea, and is an excellent bearer. I bought and grew nearly all the tall branching marrows that I saw advertised last year, and found them to be nearly all one sort, at least I could not perceive the slightest difference in several of them. The following sorts seem one variety:—*British Queen*, *Ward's Incomparable*, *Pond's Incomparable*, *Dorey's Superb Marrow*, *Superb Branching Mammoth*, *Tall Indented*, *Tall White Marrow*, and *Queen Victoria*. *Willes' King of the Marrows* is a different sort, being green seeded, and is a very good variety, but grows ten feet high. All the above sorts want sticks as high as scarlet runners, but they require to be sown very thin, and are immense bearers. The *Incomparable Marrows* are a very capital sort for the cottager, for if stuck well and high they bear a good crop, keep good till the pods are nearly white, are very large when boiled, and so very sweet that children are very fond of them. I can highly recommend this pea to the cottager. I grew a pea last season, called the *American Dwarf*, from which I gathered a nice dish the 10th of November.

VEGETABLE MARROW.—I wonder that more cottagers do not grow this excellent vegetable, as it will thrive in almost any odd corner of the garden, provided the soil is good, and it certainly makes a very nice supper for a family, stewed with some small slices of bacon.

J. K. T.

POULTRY.

For some years I have kept a quantity of poultry. I had the Chittaprats the best layers, but they are not sitters; this next year I shall have game hens for sitting, and a turkey hen. I believe a turkey makes a better mother of chicks than any bird, and I think I have always found chicks brought up by a turkey forwarder than others, and it must, I think, be from their finding them more insects, and, perhaps, having more warmth. I have not found Guinea fowls such enemies to other poultry as pea-fowls; I have kept all these, but this year I have dismissed the pea-fowls, although I was sorry to lose them, the male bird being a splendid fellow. He destroyed a great many chickens, and, being a very early riser, generally had all our early strawberries, and the young shoots in the garden, many of which he plucked off for mere mischief.

I also keep pheasants; last year one pheasant (a pied one) laid me seventy-two eggs. I was not fortunate in rearing many young ones.

I believe, with good management, there may be a great profit on poultry, but the "Durham Vicar's" case is not a singular one in having a servant who is wasteful of the food; very few servants are as careful of these things as if they were their own.—AN AMATEUR.

FLORISTS' FLOWERS.

PELARGONIUM (Otterburn).—Form of flower good; lower petals pale peach-blossom, contrasting strikingly with the deep blood-coloured upper petals. Petals rather flimsy; but if age in the plant gives them substance, it will prove a very excellent variety.

• TO CORRESPONDENTS.

. We request that no one will write to the departmental writers of *THE COTTAGE GARDENER*. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of the Cottage Gardener, 2, Amen Corner, Paternoster Row, London."

TURTLE DOVE, GOLD PHEASANT (An Original Subscriber).—The wild Turtle Dove can be kept readily, and will breed in confinement. The better plan to insure success is to bring up a pair from the nest. Next year they will pair, and I have no doubt will prove productive. I kept them, and bred for several years. They will also pair with the Collared Turtle. I have raised a progeny from them. The hen Wild Turtle does join in chorus, but her note differs from the male bird by being more feminine. I fed mine upon hemp and canary seed, or off corn or bruised wheat. I do not know, from practical experience, whether the Gold Pheasant will cross with the Bantam. I think it not unlikely, providing both the birds were brought up together from the egg.—WILLIAM RAYNER.

CAMELLIA (A Subscriber).—Your Camellia, no doubt, is one called *Henri Fabre*; at least that variety bears a flower that agrees with your description. *Camellia Hendersonii* is one also of the same colour, excepting the pale edge. Broken sandstone, powdered fine, and sifted, would answer well for many plants, but not for heaths, unless it be pure white sea sand, which, if the particles of salt are clean washed out, would also answer for strong-growing coarse-rooting plants, but not for what are generally called American plants, such, for instance, as *Rhododendrons* and hardy *Asaleas*. Your plants are grown, you say, in a greenhouse and when in flower are removed into a conservatory, and plunged in a raised bed of earth; they look well through winter, but in warm weather the leaves turn black. There are two things that will cause this: viz. the want of a free circulation of air, and too much moisture in the internal atmosphere. Your top ventilation is not sufficient in hot weather, and the moisture arising from the bed of earth becomes foul air, which, being confined, injures the leaves, and causes them to decay so quickly that they have not time to fall off before they turn black. Now the way to remedy this, is to increase the top ventilation, and cover the soil with clean sand at once, renewing it whenever fresh plants are put in. Insects will cause the leaves to decay before they are duly ripened in the course of nature. Should you have any upon your plants, destroy them at once; but most likely it is foul air that injures them—correct that, and, no doubt, your plants will continue healthy through the season. Your letter has been inadvertently mislaid, or it would have been answered sooner.

* **SION HOUSE (B. A.).**—Your letter has been answered by post. Noblemen and gentlemen must apply to the Duchess of Northumberland, for an order to see the grounds at Sion House, Isleworth. There is no appointed place this season for orders, as there was during the Great Exhibition year, 1861.

NAME OF ORCHID (W. S. W.).—The orchid flower you sent came in very good condition. It is a fine variety of *Oncidium Wentworthianum*, probably the variety known as *O. Wentworthianum Lindleyi*, which has not yet flowered in any collection near London.

BEES.—"Your correspondent, 'C. R. B.,' writes as follows:—"The old stock swarmed on the 5th of June, and was moved to another part of the garden, and the swarm put into a very large hive for keeping, and set upon the stand before occupied by the old stock. As we are all aware, the season, at all events here, was miserable up to the 8th July, so I fed this stock, and never dreamt of giving them additional room. Alas! on the 8th July, they threw off a virgin swarm, which settled in a neighbour's empty hive, and again a second yesterday (17th). From this we managed to get the queen, so of course they went home again." Your correspondent further asks, whether I would keep this hive after having once swarmed, should it not come out again? "It is very hasty, for the season here, for the last fortnight, has been extraordinary." As the above is the first report which has yet come in through T.A.'s COTTAGE GARDENER of the result of a trial of the new system, I have transcribed thus much of your correspondent's letter. In reply to his question, I observe, that the very remarkable season we have had has come to his aid in one respect (*i. e.*, if his stock does not swarm again, or is not suffered to swarm), viz:—in providing him "very large" (how large?) keeping hives with a young queen; at the same time, he has lost a valuable swarm, which, coming at such a favourable moment, in so favourable a season, would have given him a most valuable spoil in a few days time; valuable in proportion to the rapidity with which its comb will have been constructed, and to the purity, as well as quantity, of its store of honey. By all means let him keep this stock which has thrown the virgin swarm. Had the hive-room been sufficiently great (as I have recommended), no doubt there would have been no swarm, but a very great store of honey collected. As it is, the hive is "very heavy;" so far so good. I wait for further testimonies in favour of the new system, of which, in spite of its past failure, we have decided one above. I have been chiefly desirous of multiplying my stock this year, on which account I have not had so large a promised surplus of honey as I otherwise should have had; but I have marvelled too at the result of the last fortnight's collection of honey by my bees."—A COUNTRY CURATE.

GRAVES.—J. A. writes as follows:—"At page 283, amateurs are recommended to go to a person in St. Paul's Churchyard, London, for this article. To save this trouble and expense, apply to your own pork-butcher: the article is nothing more nor less than the common cuttings from the lard after boiling and the fat pressed out, and sold by them at 1d. or 2d. per lb.; I buy 5 lb. for one shilling. You can get them fresh every week, and, after cutting them sufficiently small, they may be given as they are to chickens and to any of your fowls; and also broken in pieces, boiled, and then mixed with sharps or barley-meal; this makes excellent food, and will not at all injure the flavour of the poultry."

PEASANTS.—When two months old, in a state of confinement, they will eat earth-worms, meat (cooked or raw), and peas. Indian wheat is excellent for them, as are dwarf kidney beans, raw potatoes, lettuce, cabbages, barley, barley-meal scalded, and wheat. With the above food, and in a small confined place, I have reared them to be as fine as those found in the woods. They are small eaters. No other fowl should be kept with them.—J. A.

GARDEN AT BRIGHTON (V. P. T.).—We have heard so much of the "nakedness of the land" about Brighton, that we hesitate to select for you until we hear from some of our readers there or thereabouts. Therefore, will some one there have the kindness to furnish us with a list of the shrubs, herbaceous plants, and potters, which experience has proved to be fitting for the seashore in that locality?

LILY OF THE VALLEY (Anne).—Just when the leaves turn yellow, in the autumn, is the proper time to transplant Lilies of the Valley; and troublesome things to plant they are, but they will grow in any good garden ground. If you choose roots from an old bed, take the only that have thick ends or buds, and if there are six inches of the old root, or ground runner to each bud, it will be enough. The battle is to get them disentangled. When you have as many as you want, and the ground is trenched ready for them, place the roots flat on the surface, and put three inches of a good, light, rich compost all over them. They live near the surface, like couch grass, and this flat planting suits them better than the usual way of burying one end deeper.

BRANCHING LARKSPUR (A. M.).—The variety is very fine indeed, but not the one required. The seeds from Guildford did not vegetate, or else Charley "has been and done it for them." We have the right sort at last, or, at least, have seen it lately, and seeds were promised.

CUTTING EVERGREENS (A Subscriber).—July is the best month to cut evergreens in general, but *Hollies* and *Ilex* may be cut away from May to September. Your *Ilex* (Evergreen Oak) grove is by far too thick, and all the cutting in the world cannot keep it full at the bottom until you let more sun and air to it; or, it may be, that the top branches have been allowed to overshadow the bottom ones. If so, instead of thinning out the plants, take the saw now, and shorten most of these cuttings to a good healthy branch. It is a stern law of Nature that, whatever the size or shape of an evergreen tree or shrub may be, the lowest tier of branches must be the longest. Then it follows that you must not only head down the young wood from the stools of those already cut, but some of the side branches of those now getting bare at the bottom.

COCHIN-CHINA FOWLS.—W. P. Lethbridge writes thus:—"Are the 'grouse-colour' among Cochin-Chinas, rare or not? From a very large imported hen, and one of Mr. Sturgeon's magnificent cocks, I have this year produced some three or four decided grouse-plumaged pullets, so, definitive is the colour, that strangers one and all, exclaim 'how like the grouse.' They are large, strong upon their pins, and blessed with the usual quiet demeanour of the Cochin. (We think they are not rare. We have this kind of plumage among our own Cochin-Chinas.—Ed. C. G.) Other amateur fanciers have, I trust, had as productive a season as I have; few casualties, no sickness, and great and rapid growth. Chickens to be large, must be abundantly and nourishingly fed, upon the same principle that a race-horse, from the day it is foaled, has two milk cows, besides its dam, kept for it; so must you, during the growth, provide

extra rations for your Cochin progeny. What a show we shall have at Birmingham! I only hope that dark-coloured birds will not be entirely tabooed as they were last year. My cockerels, hatched the 1st of March, weigh just 5 lbs."

CUTHILL ON THE POTATO (R. W.).—Write to Mr. J. Cuthill, market gardener, Camberwell, Surrey.

POLISH FOWLS.—R. M. may send a stamped envelope, with his or her address, to Mr. John Noble, Boston, near Tadcaster.

WINTER-ROOSTING PLACE (J. N.).—Under your greenhouse stage will make an excellent winter-roosting place for your Cochin-China fowls. Kept clean, and prevented from getting into the house, they would in no way injure your plants.

BLACK COCHIN-CHINA CHICKENS (D. H.).—If these are of a pure breed, they are a rarity. Your feeding of them is judicious; but, in addition give them, until they are a month or two old, a piece of bread soaked in beer, once daily.

NEW ZEALAND PLANTS (J. Walker).—We shall, ere long, publish an extract from your note. *Harakah* we do not know by that name. Try *Edwardia microphylla* against a wall facing the south west, and on a dry soil; it bears a yellow flower. *Pasiflora tetrandra* (Four-stamened Passion Flower) has a small green flower; is tender, and, not worth cultivating. We cannot tell which of the *Succinias* yours may be; they are evergreen greenhous shrubs, and handsome. See what Mr. Fish says about *Acacia armata* at page 214 of our present volume. We cannot tell what *Veronica* it is, not being gifted with *clairvoyance*; there are many species in New Zealand, New South Wales, &c.

BEES.—B. B. writes to us as follows:—"We shall be obliged by an answer to his query."—"My artificial swarm formed in the pan goes on well; the workers have begun to kill the drones; and they are as fierce as any bees in my apiary, scarcely allowing any one to go near them. Can you, or any of your correspondents, inform me where the vessel described by Dr. Bevan, for the manipulation of honey and wax, can be procured? It is not to be had either at Neighbour's or Marmot's. I fear this year will not be good for honey. From the 1st to the 12th of July, all the hives I could weigh, eight out of twelve, were gaining, on the average, three quarters of a pound per day; since that time these eight, consisting of stocks and swarms, have been decreasing, on the average, at the rate of half-a-pound per week—none increasing. How is this to be accounted for? One stock I have taken up, as it did not swarm last year, or this, though containing about four pounds of bees, ran only six pounds, three ounces of honey. I hope your bee correspondents will forward, as was suggested last year, the quantity of honey taken from stocks and swarms, and the system adopted by them."

BLACK POLAND FOWLS.—In conjunction with other readers of THE COTTAGE GARDENER, I was very much pleased with "A Subscriber's" "jottings," about his black Poland fowls; such comparing notes among amateurs is mutually valuable and amusing. With respect to his obliging answer to Anster Bonn's question, however, I must say that that question related only to the golden and silver-spangled Poland fowls, and the difficulty of breeding them perfectly regular in the spangling. We have kept the black Poland, and can confirm the "Subscriber's" good character of them as very good layers, but for hardihood, I cannot yield the palm to them from the Cochin-Chinas, for I find the Cochin-China fowls the strongest, hardiest birds of all that I have tried, while I have found the Spanish decidedly more tender than either, and I have reason to think the Hamburg are the same."—ANSTER BONN.

BUDDING FACILITATOR.—H. H., W. S., &c., are informed that we have no information as to where this can be obtained, but we are enquiring. Mr. J. Turner, Parkwood Springs, Neepsend, Sheffield, has a facilitator and budding knife in one handle.

WORK ON PLANTING (E. W., P.).—Mr. Cruikshank's work will suit you. It is called *The Practical Planter*, and published by Messrs. Blackwood and Co.

ARTICHOKE (W. H. Turner).—There are two varieties—the *Conical* or *French*, which is a milky-green colour, with the scales spreading; and the *Globe*, which has its scales tugged with purple, curved inwards, and compact. The latter is the finest and best.

PERUVIAN GUANO (T. F. J.).—This is most beneficially employed for corn, or any other crop, as a very weak liquid manure, frequently applied. There are carts made purposely. The usual mode of applying guano to corn crops is by sowing it over the land at seed time, and harrowing it in. Two hundred weight per acre in this mode are sufficient. The following analyses of guano are by Professor Way.

	Peruvian.	Saldanha Bay.	Western Australia.
Moisture	13.09	22.14	30.14
Animal matter and salts of ammonia	52.61	14.90	14.75
Sand, &c.	1.54	1.82	5.94
Earthy phosphates	24.12	55.50	42.14
Alkaline salts	8.54	5.04	0.03
	100.00	100.00	100.00
Ammonia furnished by 100 parts.	17.41	1.60	6.75

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No. 202.]

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ROSES AND HOLLYHOCKS.—

A. PAUL and SON respectfully invite admirers of these flowers to an inspection of the Collections at the Cheshunt Nurseries, which are now in full bloom. As every novelty obtainable has been added, the Collection will prove unusually interesting this season. Trains of the Eastern Counties Railway leave Cheshunt for Waltham and Cheshunt as follows:—7, 9, 9—30, 10—40, 12—30, 1—40, 2—30, 3—20, 4, 4—20, 5—10, 5—20, 6—20, 7—20, returning almost hourly till dark. Nurseries, Cheshunt, Herts, August 5.

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Horticulturists, and all interested in Gardening Pursuits, are invited to examine DEANE, DRAY, and Co.'s extensive stock of GARDENING and PRUNING IMPLEMENTS, best London-made Garden Engines and Syringes, Coalbrookdale Garden Seats and Chairs.

Aggravators	Hoes of every pattern
Botanical Boxes	Hotbed Handles
Bags and Hooks	Ladies' Set of Tools
Bills	Labels, various patterns, in Zinc, Porcelain, &c.
Borders, various patterns	Lines and Heels
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Cases of Pruning Instruments	Metallic Wire
Daisy Rakes	Milton Hatchets
Dibbles	Mole Traps
Draining Tools	Mowing Machines
Edging Irons and Shears	Pick Axes
Flower Scissors	Potato Forks
Stands in Wires and Iron	Pruning Bills
Fumigators	Knives, various
Galvanic Borders and Plant Protectors	Saws
Garden Chairs and Seats	Scissors
Loops	Pruning Shears
Rollers	Rakes in great variety
Scrapers	Reaping Hooks
Gidney's Prussian Tool	Scythes
Grape Gatherers and Scissors	Scythe Stones
Gravel Rakes and Sieves	Shears, various
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WEEKLY CALENDAR.

M. D.	W. D.	AUGUST 12-19, 1882.	WEATHER NEAR LONDON IN 1881.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bef. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
12	Th	Michaelmas Daisy flowers.	30.074 - 30.016	63 - 59	S.	—	43 a. 4	27 a. 7	0 51	26	4 43	235
13	F	Zabrus Gibbos seen.	30.044 - 30.041	63 - 52	S.W.	—	44	25	1 47	27	4 38	236
14	S	Sea Holly flowers.	30.016 - 30.024	74 - 55	S.W.	—	46	23	2 03	28	4 32	237
15	Sun	16 SUNDAY AFTER TRINITY.	30.033 - 30.033	70 - 48	W.	—	48	21	sets.	29	4 10	238
16	M	Birds resume spring notes.	30.000 - 30.031	77 - 58	S.W.	0.2	49	19	3 a. 13	1	3 59	239
17	Tu	Duchess of Kent's rose, 1786.	30.003 - 30.003	70 - 54	S.W.	28	51	17	3 26	2	3 46	240
18	W	Ploughman's Spikenard flowers	30.240 - 30.036	70 - 38	N.	—	52	15	3 57	3	3 33	241

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 75.4° and 59° respectively. The greatest heat, 94°, occurred on the 17th in 1831; and the lowest cold, 41°, on the 13th in 1846. During the period 169 days were fine, and on 66 rain fell.

THERE is a class of writers who may justly be called the moons of literature. They have no light of their own, but they reflect upon the objects over which they shine rays gathered from other planets, and are always truthful, and always useful. They are men who rarely make discoveries, but they duly estimate those made by others, illustrate them by showing how much the ancients knew upon the same subjects, point out how such discoveries may be rendered most advantageous, and throw over the whole varied lights and ornaments that are always illuminating and agreeable. Of such writers, Dr. Johnson has well said—"It is their task to recommend known truths by their manner of adorning them; to vary the dress and situation of common objects, so as to give them fresh grace and more powerful attractions; to spread such flowers over the regions through which the intellect has already made its progress, as may tempt it to return, and take a second view of things hastily passed over, or negligently regarded."

Such a man was Dr. WILLIAM FALCONER. He never disregarded truth, even where scrupulous eulogists think that it may sometimes be neglected, in maintaining the wrong side of a question as a display of skill and invention. "In that respect," he once said to a person who defended the practice, by the authority and example of Dr. Johnson, as good and as great a man as Dr. Falconer, "in that respect I consider myself to be a better man than Dr. Johnson, for I never in my life maintained the wrong side of an argument, knowing it to be so."

It was no rare occurrence to hear him confess his own ignorance, and acknowledge his inferiority to other persons; and yet the late Lord Thurlow, at whose table he was almost a constant guest, declared, "that he never saw such a man; that he knew every thing, and knew it better than any one else."

This slight sketch of his character may be closed with the language and sentiments in the dedication to him, of the elegant translator of the French play of *Hector*: "I determined," says this accomplished writer, the Rev. E. Mangin, "to send it into the world under the sanction of an honoured name, and had I known a man more venerated for professional talent, polite erudition, strict integrity, and true benevolence, I should not have made use of yours."

He did not live in vain for the cause of learning, or science, or virtue, or religion: his writings contain sufficient evidence of his claim to a place among the philosophers and scholars of his age and country; and his life, it is hoped, will, through the merits of his Redeemer, obtain for him the blessing of "the pure in heart."

He was born at Chester about the year 1741. His paternal grandfather, John Falconer, was a faithful adherent of James the 2nd, and died in exile, but his son returned to England, and became Recorder of Chester. Even in his youth, William Falconer distinguished himself by the comprehensiveness of his knowledge, and the discerniveness of his studies, but when once released from school, he rarely indulged in any that were not in some degree relative to his medical profession. In 1789, he became physician to the Bath Hospital. Passing over his medical works, which are characterised by an endeavour to enlighten the physician's practice by the torch of chemistry, we must pause to consider briefly, his *Essay upon the means of preserving the*

health of those employed in Agricultural labours. This was published in 1780, and we notice it more especially, because its warnings apply with equal force to the gardener.

"Neglect of changing their clothes when wet, is a great source of disorder among husbandmen. To remain in wet clothes when the body is at rest, subjects the person who is so imprudent to the united bad effects of cold and moisture. Much worse consequences, however, may be expected, when they who are heated by labour lie down to sleep, as they often do, in their wet clothes. The diminished force of the circulation and other powers of life, which always take place during sleep, cause the bad effects of cold to operate with much greater danger to health and life. This hazard is much further aggravated, if they add to this imprudence by sleeping on the ground. This not only communicates additional moisture and cold, but is, perhaps, still more prejudicial from the nature of the exhalation. It is the opinion of a physician of great eminence, that the vapour which arises from moist earth is the cause of the most dangerous fevers. Those, therefore, who put themselves wantonly in the way of such danger, are guilty of little less than suicide."

The directions for the free admission of air and other sanatory modes of treating the sick, are all admirable, and he concludes by observing—"The support of the spirits of a person labouring under disease is as necessary towards his cure as the administration of medicines. Every person that is ill should be comforted with hopes of recovery and cheerful prospects of life. To foretell a person's death in his presence, who is then ill of an acute complaint, has no small influence in verifying the prediction. Even those whose profession leads to recommend religion to others, should be careful not to dwell too much upon gloomy subjects, and giving people dispiriting ideas of their situation. Repentance and amendment of life are, no doubt, in many instances necessary to be advised, but great care must be taken to administer with advice that greatest of all cordials—*Hope*."

Previously to the appearance of the volume we have quoted from, he had published, in 1781, *An Historical View of the Taste for Gardening and Laying-out Grounds among the Nations of Antiquity*. This is another testimony of his indefatigable research and extensive knowledge of ancient literature; and similar evidence is given by his *Sketch of the History of Sugar in Early Times*, published during 1796, in the Memoirs of the Manchester Philosophical Society. Among many other quotations, he points out that "the Sweet Cane" was among the offerings made to the Lord by the Israelites (*Isaiah* xliii. 21), and that it was imported from "a far country" (*Jer.* vi. 20); but Dioscorides is the first author who specially speaks of sugar as a kind of honey, having the appearance of salt, and obtained from reeds in India and Arabia Felix.

In 1799, he published *Miscellaneous Tracts and Collections relating to Natural History selected from the principal writers of antiquity on that subject*, and this is also a monument of his extensive learning. The most useful portion of its contents is the alphabetical list of plants mentioned by Grecian writers, which he endeavours to identify, and to assign to them modern names. He died of an apopleptic attack, at his house in the Circus, Bath, on the 30th August, 1824, being in his 81st year.

At this season of Strawberry planting it will be of use to record our estimate of some of eighteen varieties obligingly furnished to us last year, and which have fruited with us this summer. Next year, however, we shall be enabled to give a more trustworthy opinion, for all strawberries, and everywhere, have this year been deficient in flavour, and our plants probably, then will be in greater vigour.

Before giving our estimate of the varieties, we will give a sketch of the history of the strawberry, published by us elsewhere some years since.

The strawberry, in its wild state, is found only in temperate latitudes, and in its European state of nature is an insignificant fruit. The wild Scarlet Strawberry of Virginia is superior to the natives of the same genus in "the old country," but the really wild Alpine of the mountain districts of Italy are not much superior to the wood strawberries of England. Even the Hautbois, in its wild state, is rarely attractive either in size or flavour.

It is not known to have been a fruit with which the Greeks were acquainted; for it is a mere surmise that it is the *Tephylon* of Dioscorides; and the evidence is as defective in support of the guess that it is the *Komaron* of Apuleius. There is rather more justification for supposing that Dioscorides included the strawberry with other plants under the name *Pentaphylon*, because the passage in Pliny (lib. xxv. c. 9), where he mentions the strawberry (*Praga*), may be so construed. It is a contortion of meaning however.

The strawberry does not appear to have been cultivated by the Romans as a garden fruit, for it is not so much as mentioned by any of their writers on the cultivation of the soil. Cato, Varro, Columella, and the rest of the Geoponic authors, do not even name this fruit; yet it was well known to the people as a wild produce among the grass and flowers about their pasture grounds; for Virgil, when warning the shepherds against the concealed adder, especially directs his monitions to those who are seeking for flowers and strawberries—"humi nascentia fraga" (earth-borne strawberries). (*Bucolic*. iii. 92.) Ovid notices both the Alpine and the Wood Strawberry (*Met.* lib. i. and lib. xiii.); and Pliny mentions the strawberry as one of the few native fruits of Italy (lib. xxi. c. 15).

Passing to more modern times, we still find the strawberry unimproved as a garden fruit, and chiefly regarded by botanists. When Lyte translated the "Herball" of Dodoeus in 1578, there does not appear to have been any strawberries known except the Wood Strawberry, and, perhaps, the White Alpine. "Strawberries," he says, "grow in shadowy woods and deep tranches, and banks by highway sides. They be also much planted in gardens. The fruit is green at the first, but red when it is ripe. Sometimes also you shall find them very white when they be ripe; in taste and savour very pleasant."

Caspar Bauhin, in his "Pinax," published in 1623, enumerates the Wood Strawberry, the White Wood Strawberry, "the strawberry with fruit as large as a small plum," the Hautboy, or *Haarbeer* of Gesner, and the Alpine.

In Gerard's Herball, published by him in 1597, no

notice is taken of any strawberries but the Red and White Wood and the green fruited, the two last "not to be found save only in gardens;" and Johnson, in his edition of the same work, published in 1633, does not mention any others.

Servius calls them *Mora terrestris* (Earth Mulberries).

Parkinson, in his *Theatrum Botanicum*, in 1640, did not add to the knowledge of the strawberry and its varieties which had been published by his predecessors; but in his *Paradiac*, which issued from the press 16 years later, he describes, besides the Wild Strawberry, the Virginian or Scarlet, and the Bohemian, which we do not clearly identify with any of the varieties we cultivate, unless it be the Hautbois. "The Bohemia strawberry," he says, "hath been with us but of late days, but is the goodliest and gratest."

Quintinie, in his "French Gardener," translated by Evelyn in 1672, enumerates four kinds of strawberry—the White, the large Red, the Copprons, and the small Red wild. The two last, he says, need not be cultivated, being obtained wild abundantly. But it is curious to find that some of our recent recommendations in the culture of this fruit are merely revivals of M. Quintinie's practice. Among these, are planting in August, removing the runners as soon as emitted, and renewing some of the beds every year, as none, he observes, should be cultivated for more than four years.

Switzer, in his "Practical Fruit Gardener," published in 1724, only mentions four kinds, the red and white Wood, the Virginian or American, and the large Polish or Polonian.

It is quite certain, therefore, that quite late in the century, any highly improved variety of the garden strawberry was unknown, and we will, therefore, now proceed to detail separately such biographical notices of each kind as we have collected, and thus trace as far back as we can their respective histories.

The *Wood Strawberry*, we have seen, was known to the Romans, and being a native of our own woods, it is the earliest, also, that is mentioned by authors as an inhabitant of our gardens. We have seen that Lyte, in 1578, says it was "much planted in gardens;" and Tusser, in his "Five Hundred Points of Good Husbandry," published five years earlier, represents the yeoman as saying, in September,

"Wife;—into the garden, and set me a plot
With strawberry roots, of the best to be got:
Such growing abroad, among thorns in the wood,
Well chosen and pricked, prove excellent good."

And Stowe, as is truly quoted by Shakspeare, records that the Bishop of Ely's garden, in Holborn, was distinguished for the excellent strawberries it produced, even as far back as the reign of Richard the 3rd (1483).

Thomas Hyll (1593) informs us, that the berries be much eaten at all men's tables in the summer, with wine and sugar, and that they will grow in gardens until the bigness of a mulberry.

The *Alpine Strawberry* was introduced into France in 1764, by M. de Fougereon, who observed it upon Mount Conis. Three or four years previously it was cultivated

in the neighbourhood of London; and M. Duchesne, writing in 1766, says that the King of England was understood to have received the first seeds from Turin: it was such a rarity that a pinch of the seed sold for a guinea, but its fecundity very speedily reduced this price. It was introduced into England by the Dutch market gardeners, who sold the plants at the rate of five livres per 100. It was from England and Holland that plants of this strawberry were first procured for the French king's garden at Trianon. (*Duchesne's Histoire des Fraisiers*, 57.) The exportation is now reversed, for Alpine strawberry seed is commonly imported into this country from Paris.

The *Cupyrion*, which we have seen was mentioned by Quintinnic, was the first improved garden variety, and was obtained from the seed of the Wood strawberry. It appears to have been obtained at Montreuil, in France, by a strawberry grower named Pierre Fressant, about the year 1600, and was known in 1766 as the Fressant strawberry. Duchesne thinks it is the *Fragaria hortensis* mentioned by Salmon in his *Botanologia*. (*Histoire des Fraisiers*, 113.) The variety is now unknown, but has probably been an ancestor of some of our present improved varieties.

The *Hautbois* is said by Miller to have been brought hither from America; but in this, we think, he was mistaken. It is not found native on that side of the Atlantic, but it is found wild in Germany; and Parkinson, we have seen, probably calls it the Polonian or Bohemian, and says it was but lately introduced. Its very name seems to be a corruption of its German designation, *Haarbeer*. It is the *Capiton* of the old French writers. Parkinson says, in 1629, "it hath been with us but of late days. Master Quæster, the postmaster, first brought them over into our country, as I understand; but I know no man so industrious in the careful planting and bringing them to perfection in that plentiful manner, as Master Vincent Sion, on the Bank side, near the old Paris garden stairs, who, from seven roots, as he affirmed to me, in one year and a half, planted half an acre of ground with the increase from them, besides those he gave away to his friends."

The Chili Strawberry.—The Spaniards conveyed the strawberry with them to South America, and at the foot of the Cordillera mountains, near Quito, our present Chili variety was raised. It was seen there by M. Frezier during his "Voyage in the South Sea," and brought to France by him on his return to Marseilles in 1716. It was called by the South American Spaniards *Fruitle*, or Little Fruit, a singularly inappropriate name if the comparison was with other strawberries, for it was then the largest of the known varieties. The French, gallicizing the name, called it *Le Fruitlet*, and it appears to have been first successfully and largely cultivated by them at Brest. From thence it was procured by the plant dealers of Amsterdam, and Miller imported it from Mr. Clifford's garden at Hartecamp, near that city, in 1727. It had bloomed in Miller's garden at Eltham in 1730, but had not borne fruit; and even, as late as

1766, Duchesne says, that Miller considered its cultivation abandoned in England on account of its sterility.

The parentage and birth-place of the *Pine Strawberry* is uncertain. It first became known to the English and French gardeners about the middle of the last century. Duchesne seems to consider it a hybrid between the Scarlet and the Chili, but Miller considers it a new species. At first, in 1759, he believed that it was a native of Louisiana, but in later editions of his Dictionary he seems to doubt between that country, Virginia, and Surinam. Duchesne is quite right in thinking the latter tropical locality too hot to have been its birth-place. It reached the Trianon Gardens in 1702, and in company with other plants from Canada and Virginia. (*Histoire des Fraisiers*, 202.)

The *Scarlet*, known also as the Virginian and Canadian strawberry, is most probably a native species of North America, and brought to England before the middle of the 17th century. Bradley, in 1720, and Switzer, in 1724, mention it in their lists of garden strawberries. It was included in Tradescant's Catalogue in 1623, and more fully particularized by Parkinson in 1656. Mortimer, writing in 1707, says it was lately introduced. It is usually considered by botanists as a distinct species, but Duchesne thinks it an offspring of the Wood strawberry.

The present century, subsequently to Knight's experiments on hybridizing, has been the birth-time of many varieties, but few of which, however, have permanent claims upon the favour of the cultivator. These few exceptions are—the *Roseberry*, raised by Robert Davidson, Esq., near Aberdeen, in 1810; *Wilmot's Superb*, of great size, but deficient flavour, produced in 1825; *Grove End Scarlet*, raised by W. Atkinson, Esq., at Grove End, Paddington, in 1820; *Keen's Seedling*, raised by Mr. Michael Keen, a market gardener at Isleworth, about the year 1823; *Elton*, raised by T. Knight, Esq., in 1824; *Downton*, raised in 1816 by the same distinguished horticulturist; and *Myatt's Pine*, *Prince Albert*, *Eliza*, and *British Queen*, all raised by Mr. Myatt, market gardener, at Deptford, within the last few years, and some few others we shall mention presently.

In Scotland, next to England, is the strawberry cultivated more largely and more generally than in any other country of Europe. We have the following particulars on the subject from Mr. J. Smith, gardener to the Earl of Hopetoun.

• The cultivation of strawberries in the neighbourhood of large towns in Scotland is found to be a very lucrative employment, and is therefore carried on to a considerable extent. By its means poor and industrious men have risen to comparative opulence, and, in some instances, the farmer has been induced to add it to the ordinary branches of agriculture. It is stated by Dr. Neill, in his treatise on the Gardens and Orchards of Scotland,* and from sufficient data, that the quantity of

* Neill on Scottish Gardens and Orchards, in Sir John Sinclair's General Report on the Agricultural State, &c., of Scotland, vol. ii., page 90.

land under strawberries near Edinburgh does not exceed a hundred acres.* Dr. Neill has given, in the work referred to, a brief account of the strawberry gardens in the vicinity of Edinburgh in the year 1812. At Glasgow, strawberries are estimated to occupy only one-tenth of the market gardens, which places the consumption of that town considerably behind that of Edinburgh, in which, from the market duty paid, the annual supply appears to be from 30,000 to 50,000 Scotch pints.† If, however, we take into account the quantities which are consumed in the gardens—a favourite resort of parties of the citizens in the strawberry season—it is probable that Dr. Neill's statement, in the work already quoted, of from 60,000 to 80,000 Scotch pints on an average, according to the season, may not be exaggerated.

The strawberry gardens in the immediate vicinity of Edinburgh are neither very numerous nor extensive, principally on account of the high rent of land; but also because most of the fields, and particularly the market gardens, have become so saturated with manure as to cause them to be more productive of leaves than of fruit. The greater number are about Dalkeith, Laswade, Roslin, Ratho, and Corstorphine, all of which places are within eight miles of Edinburgh. There are, however, some considerable strawberry gardens beyond this circle, even as far as Haddington, a distance of 18 miles. Excepting the large sorts, they are pulled without the calyx, and are put into small baskets, each containing nominally one Scotch pint. These baskets are packed above one another in square hampers, and are conveyed to the market on a light carriage or framework, hung on springs.

The labour of cultivating strawberries, which is usually light, becomes incessant in the fruit season, on which account the ground employed for this purpose round Edinburgh, by one grower, is seldom more than six Scotch acres, and in general does not exceed three or four. As, however, the cultivation of gooseberries, currants, &c., is commonly combined with that of strawberries, market gardens are usually more extensive. Of these the rent varies from £5 to £15 per acre, those being cheapest which are farthest from the city. The average price of labour per acre, including carriage, &c., is less than £5; and the rate of profit, taking a combined average of seasons, is from £35 to £40 per acre. Occasionally a much greater sum is obtained. In one instance, a gross amount of £120 was made from a single acre, planted in equal proportions with the Old Scarlet and Roseberry varieties. Greater sums than this have been talked of; and it is said that 3400 Scotch pints of the Roseberry kind have been gathered from 1½ acre. The usual rate of production is much below this, and in dry seasons very far so indeed. (*Hort. Soc. Trans.*, vi, 512.)

It is difficult to estimate the extent of land occupied by

* The Scotch acre is to the English acre nearly in the proportion of five to four; the former containing 6084 square yards, the latter 4840.

† The Scotch pint contains 103 solid inches, and is nearly equal to three imperial pints.

strawberries in the vicinity of London; but Mr. Cuthill, a good authority, estimates it at about 100 acres. Mr. Myatt has seven acres at Deptford devoted to strawberries.

We now come to our estimate of sorts, and we shall only mention those of which we can speak confidently. *Hooper's Seedling*, *Keen's Seedling*, and *Black Prince* were all ripe the earliest, and on the same day—June 18th. We prefer the first-named, the berry being handsome and better flavoured than either of the others. *Staircase Seedling* and *Kitley's Goliath* were each ripe June 27th. Neither of them of superior flavour. Kitley's very large.

Thom's Seedling was ripe June 20th, and is a very superior fruit. Berry a flattened cone, deep red, large, and excellently flavoured.

Myatt's Deptford Pine and *Pellvillain's Compté de Paris* were ripe June 30th. The Deptford Pine has a large, conical, deep-coloured berry, but its flavour only of medium quality. The *Compté de Paris* is one of the very best varieties cultivated. Its berry is the handsomest, being globular, bright as if varnished; pale red in colour; medium size; and flavour superior.

Cinquefoil had its first fruit ripe July 7th. This is also a very superior fruit. Berries large, flat, and irregular; dark-coloured, and flavour excellent. It grows very low, and has the peculiarity of many of its leaves being 5-leafleted, instead of 3-leafleted as usual. *Biston Pine* was ripe at the same time, and is a large fruit, but chiefly desirable as a bright, white, waxy-looking fruit, ornamental in the dessert.

Jackson's Britannia was ripe July 12th. Berry large, flat, and irregular, and deep purplish crimson in colour. Hollow, and flavour not like that of the strawberry, but more like that of the fig.

FORSYTH MSS

ANY information relative to our Australian settlements is more than ordinarily interesting just now that there is a mania for proceeding to their "Gold Diggings." The information we have to place before our readers relates to the very earliest days of their settlement as a colony, even to their difficulties under their first commander—Governor Phillips. He established the colony at Botany Bay in the beginning of the year 1788, and left it at the close of 1792.

"During the remainder of his life he lived at Bath, on a pension of £400 a year. His government was a period of great difficulty, indeed, as may be supposed in an infant settlement formed of such materials, and situated at so remote a distance from the parent country; and had it not been for what Dr. Laing calls the energy and decision of character, tempered with the utmost humanity, which Governor Phillips uniformly evinced under the most trying circumstances, it is possible that the colony might have perished, or been abandoned. A wealthy and respectable inhabitant of Sydney, who arrived in the colony during the administration of Governor Phillips, as a free person, mentioned that his ration for a long period was only a cob, or single head of Indian corn, a day; and that for three years he had lived in the colony in the constant belief that he should perish by hunger. The government of such a colony, under such circumstances, was indeed most difficult, demanding

the rarest qualities of mind. Various interesting traits of Governor Phillips' character are still mentioned by the older inhabitants of the colony. One of these is sufficiently characteristic. On seeing any person with a dog in the course of his walk through the settlement, indignant at the maintenance of one useless mouth in the colony, and yet desirous that the owner of the dog should have a more valuable domestic animal, he would say, 'Kill your dog, sir, and I will order you a pig from the store.' (*Gentleman's Magazine*.)

Of the difficulties the first settlers encountered, the following letter among the Forayth MSS. bears testimony. It is dated Norfolk Island, August 33rd, 1790, but bears no signature. It coincides with Governor Phillips' despatch, dated in the February of the same year, which may be perused in the *Gentleman's Magazine* for 1791, page 271. It will be seen in the following letter that the writer states that they found their gardens good friends in time of need, and we incline to think that even now the spade and the plough will be more enduring friends than the cradle of the gold washer.

"Governor Phillips being alarmed for the subsistence of the colony, on account of no supplies arriving in February last, determined, with the advice of the other officers, to dispatch the *Sirius* to China, or Batavia, to bring provisions for the inhabitants—supposing (as was really the case) that some accident had happened to the ships sent from England. He accordingly sent the *Sirius* and Supply brig, with a number of marines and convicts, to this island, with a proportion of the provisions then on hand, very justly supposing the fertility of this island would support them better than keeping them at Port Jackson.

"The weather being unfavourable at the time of their arrival, unfortunately the *Sirius* was wrecked on this island; by the indulgence of kind Providence no lives were lost, and we had the good fortune to save the greatest part of her provisions and stores.

"My friend, Mr. King, was recalled from the command of the island, in order to go as agent to the Indies, and purchase us provisions; and Major Ross, lieutenant governor of the colony, came here and took command of the island. As soon as the Supply brig had landed their stores, &c., she returned to Port Jackson, from whence, I learn, she immediately sailed for Batavia to procure ships to bring provisions for the settlement. You may easily suppose we were in a disagreeable situation, not having three months' provisions on hand; and as the ships from England did not arrive at the time expected, we had little hopes of relief till the ships arrived from Batavia, which would at least be seven or eight months. Major Ross immediately called a council of officers, when it was thought proper to go on short allowance of provisions, so as to make it last till the crops of grain would be ripe, or a supply arrived. Every person, therefore, was ordered to be served from the store only four pounds of flour, two pints of rice, and two and-a-half pounds of pork, per week. This was the 20th of March, 1790. On the 15th of May it was thought proper to reduce the allowance of provisions still lower, when every person received three pounds of flour, one pound of rice, and seventeen ounces of pork, per week, at which ration we continued till the 7th of August, when the ships arrived.

"Our situation was not so distressing as it might appear, having plenty of vegetables in our gardens, and birds in great abundance. In some of my former letters I described to you a species of birds that burrowed in the ground, nearly as large as a teal, with which this island abounds; they are a sea-fowl, and come on shore about the beginning of March to lay their egg (which is but one at a time), and hatch their young; and when they are able to fly they return to the sea again the remaining part of the year. These birds we found in such great abundance, on a mountain in the middle of the island, as is almost incredible.

"I must own, was I to hear a person relate what I now declare as a fact, I should look on it as one of those romances which travellers often indulge themselves in. From the latter end of March till the 7th of August there

were (on a moderate computation) not less than three thousand of these birds brought daily into the town, without the least appearance of a decrease in their numbers at the place they were caught, till within three or four days before the arrival of the ships to our relief, when they appeared to decrease very fast, and people were alarmed, fearing this inestimable blessing was going to leave us. But, fortunately, the ships appeared in sight, and dispersed that heavy gloom that seemed to hang on every countenance."

GOSSIP.

We were wrong in stating that Mr. Punchard exhibited Cochinchina fowls at the Lewes Show. He did not exhibit for the prize, because the Committee of the Agricultural Society could not allow him to substitute a cock of his own rearing for an imported one which he had entered. When we stated that Mr. Higgs' pen of Cochins carried away the prize from those of Mr. Sturgeon and Mr. Punchard, it was no disparagement of the fowls of these two gentlemen. Our high opinion of their stock has been too often expressed in these pages for us to be so misunderstood.

There is an erroneous opinion prevalent, that eggs cannot be sent to a distance without being spoiled in the carriage. To test the truth of this opinion, Mr. Punchard has sent out with each batch of eggs a printed form, with columns to show the results, and requesting the purchaser to fill it up and send it back.

We have before us a copy of all the returns, and from this it appears that Mr. Punchard sent eggs to sixty different persons. The number of eggs sent to them amounted to 878, and from these were produced 587 chickens. This total, however, does not give all the evidence in refutation of the opinion against travelled eggs, for there are numerous instances such as this: "Sent 13 eggs, travelled 350 miles; produced 11 chickens." Another gentleman, who had 9 chickens from 13 eggs, after they had travelled 70 miles, says: "I have reason to speak well of your mode of packing, for this result is better than any I have had this very unfortunate year for hatching. I have set 80 eggs, and have not had a dozen chickens." Mr. Punchard packs the eggs in bran, in stout boxes; the eggs, we believe, with their small ends downwards.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

- ALLENDALE, Sept. 11th. (Secs., G. Dickinson and G. J. French.)
- BATH, Sept. 16th. (Sec. H. T. St John Maule, Esq.)
- BRIDGEWATER, Sept. 22. (Secs., Mr. J. Leaker and Mr. J. Howard.)
- BRISTOL, Sept. 15th. (Sec. Mr. D. Nafaby, Jun.)
- BURY ST. EDMUNDS, Sept. 10 (Abbey); Nov. 26 (Chrysanthemums). (Sec. G. P. Clay, Esq.)
- CALEDONIAN (Inverlochy Row), Edinburgh, Sept. 2, Dec. 2.
- CHELTENHAM, Aug. 26.
- CLAPHAM, Sept. 11.
- COLCHESTER and EAST ESSEX, Sept. 8, at the Rev. T. Round's grounds, Holly Trees, All Saints.

DURHAM, Sept. 8.
 FORFARSHIRE (EASTERN), Sept. 15 (Arbroath).
 GLASGOW, Sept. 10.
 HALIFAX, August 18. (Sec. E. Pholman).
 HAMPSHIRE, Sept. 9 (Southampton), Nov. 18 (Winchester). (Sec. Rev. F. Wickham, Winchester.)
 HEXHAM, Sept. 15, 10.
 HULL, Sept. 16.
 KIRKCALDY (Fifehire), Sept. 9.
 LINCOLN, Sept. 14.
 LIVERPOOL, Sept. 2 (Botanic Garden).
 LONDON FLORICULTURAL (Exeter Hall, Strand), Aug. 24, Sept. 14+, 28, Oct. 12+, Nov. 9+, 23, Dec. 14+.
 MAIDSTONE. In-door Show. Sept. 8. (Sec. Mr. J. G. Smith, Week-street.)
 MID CALDER (Parish school-room), Sept. 10.
 NEWBURY, Sept. 3.
 NORTH LONDON, Nov. 23, Chrysanthemum.
 NORTHAMPTON, Sept. 27, Dahlia.
 OXFORDSHIRE (Royal), Sept. 23. (Secs. C. Tawney and W. Undershell, F.R.S.).
 PERBLESIRE, Sept. 14th. (Sec. J. Stirling.)
 PONTELAND (Newcastle-upon-Tyne), Sept. 8. (Sec. Rev. J. M. St. Clere Raymond.)
 SOUTH DEVON BOTANICAL and HORTICULTURAL, Sept. 7. (Sec. J. Cree Hancock, Esq., Stonehouse.)
 SOUTH LONDON (ROYAL), Aug. 19+, Sept. 2+, 8, Oct. 14+, Nov. 11+, Dec. 9+, 16.
 SHACKLEWELL, Sept. 1.
 SURREY AMATEUR (George Canthing, Grove Lane, Camberwell), Sept. 15, Dahlia.
 TROWBRIDGE (Oftand Exhibition), Aug. 25.
 TURRIFF, Sept. 17.
 WHITEHAVEN, Sept. 17, Dahlias.

POULTRY SHOWS.
 BIRMINGHAM and MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
 BRISTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Maitmont.)
 BURY and RADCLIFFE (Lancashire), Sept. 3 (Radcliffe).
 CORNWALL (PENZANCE), about a week after the Birmingham. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)
 LIVERPOOL, Sept. 23.

THE VINE—GRAPES, &c.

THE early fruit is gone, the succession crops and greenhouse vines are now ripening, and the late grapes will soon begin to take their last change; what is to be done?

Assuredly this is an important period to each class, and we must endeavour to delineate the features peculiar to such conditions.

The early fruit is gone; the leaves in a brownish condition, and yet, where vines are healthy, still attempting to produce late shoots. The vine is truly a susceptible, a wonderful tree. Who, that had never before seen or heard of the vine, yet accustomed to our more massive and timber-producing fruit-trees of northern climes, would for a moment suppose that such a half-solidified-looking cane could produce such a weight of luscious fruit, and that too (under favourable circumstances) for a century; or, indeed, much longer? Really the absorbents must be both active and long-enduring.

Thus much for the vine under congenial circumstances; how different the darker side of the question. Who has not seen a vine, ill circumstanced, battling year by year, not to extend, but simply to preserve, a little vitality? Shall, then, a vine which has been early forced be hurried into a state of rest? There is little doubt, that a complete cessation of growth, soon after the fruit is ripe, would produce a somewhat earlier habit in the ensuing spring, and the buds might possibly break with more uniformity. But this benefit would, in many cases, be counterbalanced by a want of energy,

if not by positive weakness. The tax on the powers of the vine are so great during the ripening of a full crop, that, be the vine ever so strong, it will be observed to fail; that is to say, growth generally becomes suspended during this process. This is sufficiently convincing, and points, moreover, to the reciprocity requisite to carry on active growth; for in this case it will be seen, that all available growing matter is drawn into, and appropriated by the fruit. The tree thus becomes somewhat emptied of those enriching fluids, the presence of which are requisite in the ensuing spring as food to the unfolding bud, and to carry out a free development up to the point when the new foliage commences elaboration. Such is, we think, borne out both by science and practice. Although what are termed late growths, are, after a certain period, of little use, and in some cases a positive harm, yet there can be little doubt that early vines, exhausted with their recent crop, may be allowed to ramble freely for a month or so after the crop is removed; say, until the early part of August, when rest must be thought of; and this will be soon induced by continuing to pinch every lateral as soon as an effort at new growth is attempted. Thus a considerable amount of elaborated matter will be added to the stock; a sort of surplus fund for the ensuing year, besides an active impulse given to the roots which had become somewhat torpid. If any one will examine, at this period, the roots of vines with ripe fruit, or recently cut, and where manurial top-dressings have been applied, he will find the roots of those possessing growing shoots revelling with the utmost activity in the decaying organic matters, whilst the roots of those overpowered and producing little wood are in a comparatively resting state. Means then may be taken for awhile to keep up a lively action at the root; where borders are dry, a good sousing of liquid manure may at once be given, and rambling shoots trained so as to enjoy the light.

Successional Crops.—By these are meant grapes in course of ripening, and such will, in the main, be the position of the amateur with one house, and what are termed greenhouse vines. In order to do a moderate amount of justice to greenhouse vines, the proprietor should, for a few weeks, weed out most of his in-door stock of plants, and friend Fish will surely bear his testimony to the fact that, like turning horses out to grass and taking their shoes off, it does most of them a deal of good. As for those plants which are in their nature "miffy," or those troubled with vegetable indigestion, why, surely a frame, with its face to the north, will be a good situation for them. Here, with a plenty of cinder ashes beneath them, they will at least endure the vicissitudes which an English summer can give rise to. The removal of many of the plants will give breathing room; will allow, not only fresh air, but occasionally a puff of wind to penetrate the stagnant nooks and corners of the house. Who can for a moment doubt, that crowded and ill-ventilated places are liable to engender miasma, and that such exercise a hurtful influence on the vegetable as well as the animal kingdom? Let this period, then, be selected as a sort of gaol-delivery, and every portion of the house washed down.

The *Oidium Tuckeri*, or vine mildew, has been making fearful ravages of late, and we, amongst the rest, have received our annual visitation of this sad pest. We have had all our walls washed with lime well charged with sulphur; have had fires lighted three or four evenings successively; the flues or pipes being sprinkled with sulphur every evening, and the houses closed. In addition, we have tried the hydro-sulphuret, the invention of M. Grison, and have every reason to think it will prove effectual, though we doubt the complete efficiency of one application. Let us advise every reader of this work to use sulphur most pertinaciously, whether

the vines are affected or not, for we have never experienced any damages from its use, when applied judiciously. In sprinkling, or painting, flues or pipes, we hold one maxim as our safeguard—never to apply it to any surface which can by any possibility become so hot as that it could not be comfortably grasped by the hand whilst counting twenty. This, although rule-of-thumb work, has ever proved a safe proceeding. What is termed a small house—say twenty feet long by twelve feet wide—may receive three ounces of sulphur at any time, and four or five to an ordinary-sized house.

To return: after the house is cleared, let the vines be thoroughly examined, and the surplus laterals removed, in order to do justice to the ripening of the fruit. Let all beware of so reducing them as to suffer the sun to shine immediately on the fruit; no greater mistake can be committed. Such practice is sure to injure both size, colour, and flavour. The finest and blackest grapes we have ever seen have been ripened in deep shade,—strange as it may seem. Let the maxim, then, be to remove just as much of the later spray as shades the earlier foliage, that is, providing it is still in a healthy condition; if not, decaying or injured foliage may be removed, and later growths be permitted to supply its place. We hold it good practice, however, to pinch all growing points when the fruit is changing colour; this causes a temporary cessation of active growth, and, by consequence, a higher concentration of the juices in the bearing branches; but as soon as the ripening is complete, the vines, if healthy, will make another effort to refill their partially-exhausted vessels, thus providing for a lively vital action in the ensuing spring. When grapes are really ripe, and not required to hang many weeks on the tree, most of the early laterals near the fruit may be cut clear away. This is the practice of most good grape growers, and is understood to render the buds which must produce the ensuing year's crop more plump and firm.

If any dull weather occurs, fires may occasionally be used; many late crops are seriously injured through low temperatures, accompanied with much moisture of atmosphere. Ample ventilation, day and night, is the thing on which we must depend for colour and flavour; depend on it, a codding system will not produce first-rate grapes. And let our readers remember, that the ripening process should be slow; slow, through abundance of air. We believe that the necessary slowness of the processes in our climate, as compared with tropical climates, is the reason why first-rate grapes in Britain are more luscious than the foreign ones; albeit, perhaps, not so sweet.

It may here be suggested to those who must introduce pot plants to their vinery very early in the autumn, that it will be well not to encourage any late growths, but to persist in stopping every growth from the moment the grapes are ripe. It will be necessary, also, to remove every lateral about the end of August, in order by such means to encourage a free circulation of air; as essential to the plants as to the grapes. We will speak of winter, or late grapes, shortly.

R. ENNINGTON.

STOVE PLANTS IN THE OPEN AIR.

REMOVING stove plants to the greenhouse when the greenhouse plants are turned out-of-doors for the summer is a practice almost as old as the use of glass houses for plants. Most of the old authors recommend it, and many writers of the present day subscribe to it, and yet one may travel a long way in the country and not see a greenhouse converted into a stove. The most that is done by the best gardeners in these days is, where a late vinery is forced for six weeks after the end of April, to remove the soft-wooded stove plants then

in rapid growth, to this vinery, and keep them there as long as the vines do not shade them too much.

The next, and a better step, is a *close cold pit*, almost a new term in our garden writings. More than two-thirds of our best stove plants will do better, or, at least, as well, in a close cold pit, from the end of May to the end of September, than in the stove. This is the plan which is followed in most of the London nurseries, but in some of them a slight bottom-heat, with dung or tan, is provided for the close pits; just as they do who plant out melons for a summer crop in cold frames, or as the cottager does with his cucumber bed in May, give a slight bottom-heat to start with and after that take the chances of the season. Each of these ways proving in detail the true theory of night temperature.

Mr. Appleby has gone round the Pine-Apple Place nursery with me one afternoon, opening the lights of whole ranges of long "close cold pits," filled with stove plants, which were watered overhead two hours before, and were now in a damp close heat of, perhaps, 90° a little before sunset, and that without any bottom-heat, only from the afternoon sun, and before the sun got on them next morning the temperature would be down as low as 50°, and sometimes lower, yet nothing could look more thrifty than did the plants.

Now, if you take the best constructed greenhouse in England, and get the best gardener in the country to look after it, he could not grow those stove plants in it half so well as they were grown in the close cold pit; but why the thing cannot be done no one has ever yet explained. The reason why plants grow better in pits where dung-heat is applied, is accounted for by saying that the leaves suck in so much of the bad smell, which is ammonia, but in a pit with only bricks and glass, with wooden framing, there can be no more ammonia than in a greenhouse made of the same materials. Here, then, is a fix, the cause of which we do not understand properly, but the effects are familiar to every gardener of note in the Kingdom.

But here step in Mr. Appleby and Mr. Fish, and wish me fixed on safer ground, so I step out into the flower-garden, and walk down between an avenue of *Russetia juncea*, some in pots or vases, and others planted in circles on the grass, like so many standard roses. They are all in bloom, and better than you see them now in the stove, but not better than they were flowered when they were first brought out for competition fifteen or sixteen years ago, and there are one hundred stove plants in this country that would give the same exotic character to a straight walk in a flower-garden, and, what is as much to the purpose, it is either in the small cottage garden, or in the most extensive, that this style seems more appropriate, because the man of rods and yards may say that his space being so confined he must create interest for it by giving it this foreign aspect, and in such large places as Chatsworth and Trentham Hall, you expect to meet with every kind of style, as well as new arrangements and original ideas, exemplified every year. What I wanted to effect by this trespassing on the greenhouse and stove departments is to knock on the head, and altogether crush, the old and foolish notion that a greenhouse is a good place for stove plants in summer, and a better stepping-stone than any other way when you want to turn stove plants out-of-doors into the flower-garden, as I am convinced more and more every year, that many plants, now spoiled by too much uniform heat in our stoves, would flourish and do much better out-of-doors from the end of June or middle of July.

Many years back I had been compelled to turn nearly five hundred stove plants out-of-doors at the end of July, owing to some alterations that were to be made in the houses, and before I could get them in again I had to mat over some *Ixoras* to save them from the early

frosts in October, and the old *Calceolaria bicolor*, the *Heliotrope*, and the *Potatoes*, were blackened by the frost before the *Jasmin* suffered under a single nail.

The *Russelia* is only an instance out of many, but I prefer it to illustrate what I so much wish to see in our flower-gardens, because a friend of mine has been in the habit for years to have it in avenues, just as I have said, because it is a plant so easy to increase from cuttings that no one need grudge trying it out for an experiment. The whole of the summer-flowering *Justicias* (we must not include *coccinea*, for it is a late autumn-bloomer) will flower as well out-of-doors as in the conservatory, and better than in the stove, at least will hold on longer. *Gardenias* the same, but they do better in peat beds. Why instance particular plants when the field is almost untrodden? A much valued correspondent, whom I have never seen, mentions, in a letter received this morning, that he "is doing a little in the out-of-door tropical line, which is an old fancy of his; he has done it on a wide, shallow, trodden-down hotbed about twenty feet long, ten feet wide, on a platform of brick. *Maranta zebra*, will do; *Hedychium*, *Sugar Cane*, *Pine Apple*, *Cactus Oil plant*, *Hydrangea* of sorts, *Begonias*, *Ipomoeas*, *Cucurbitaceae*, *Richardia* (old *Calla Ethiopica*), *Acacia lophantha*, *Colocasia esculenta* (flourishing), *Maize*, &c." Now here is a grand secret: an old, large hotbed was first made use of; in due time all the air that the state of the sun would allow of was given to the plants in May, and by Midsummer the lights were, very likely, left off at night, and when thus inured gradually to the open air, taking away the hotbed frame, if that was thought necessary, would be no check to their growth. Therefore, theory and practice go hand-in-hand in pointing out the hotbed, or no hotbed pit, to be the proper way of inuring stove plants to stand the open air, and not the greenhouse, where they are at once exposed to too much air and too much dryness, after all we can do, unless, indeed, the greenhouse is kept close and moist, and if it is its character is gone, the name only is changed, the system is the same as in the old stove.

Only think of a cottage gardener having a plot of Pine-apples growing at the end of his Ribwort's bed like so many globe Artichokes! If my garden was big enough, I would have a row of Pine apple plants next year, if I had to go to Covent Garden market to get them fruited; but Mr. Barnes fruited Pine-apples out-of-doors in Devonshire as freely as Love-apples (Tomatoes), and with far less trouble as to thinning and pruning. But for a man to make the world believe in such simple things now-a-days, he would need to plant an acre or two of the Upas tree, and kill all the rooks and jackdaws in the country with the smell of it, as they used to say of the tree in Java. After all this, I would thank any of our readers who could send us a report of stove plants having flourished in England in the open air during the summer. Who would have thought that the *Russelia* would bloom out-of-doors as well as a Fuchsia. But as it has done so over and over again; why not *Gardenia Stanleyana*, or a score of more interesting plants? All the stove *Siphocampylites* may do better out-of-doors than any other way; *S. bicolor* can never be flowered in a pot as it does in the open border; and *Silvias* were classed with stove-plants in the only catalogue gardeners had access to when I took up the spade; so that, without trials and experiments, *Salvia* might have been forgotten long since, like many more things that would now come in useful to keep up the spirit for variety, usefulness, and brilliancy in the flower-gardens. Some say, that we shall never be driven to make the best of what we have, until all the plants in the world are found out, and brought together. They, instead of sending out collectors at enormous cost, we shall lay out our strength on other means, such

as hybridising, forcing, or starving plants above or below their natural ways, to procure "sports," and trying their capacities for different climates;—and all these points must engage the attention of gardeners some day or another.

When we come to speak of strange experiments, the most learned are as much at sea as the dullest of us, and he of the most extensive practice has the less reason to be dogmatical on any point which he may think he has mastered. There is a cutting just laid down at my elbow enough to make me blub all over, for I have often said the parent was barren, yet I urged on experiments to see if it was really so. The beautiful bedding geranium, with striped flowers, and called *Sidonis*, has been crossed, and the cross has just flowered. There were only two cuttings to spare, and a perfect stranger sent one of them to me, through the post, the very highest compliment he could pay me. The flower I did not see, for this reason, "it was so admired here, and I had at once crossed it with several others." I would sooner lose my right ear than have lost the chance of the first grand-child of *Sidonis*; but here is the description of the seedling:—"I send you this through the editor, not knowing your address." The *Sidonis* seedling has produced a head of flowers, and is a beauty; colour darker and richer than the parent; flowers smaller and rounder, with something of a blotch in the upper petals; truss stiff as wire, upright, and well above the foliage; petals with a tendency to crumple—the only fault; colour exquisite."

D. BEATON

HARD-WOODED PLANTS.

TETRATHÆCA VERTICILLATA.—This is a plant that must ever please an amateur of refined taste, and with but limited space at his disposal. The generic name is derived from the four cells of its anthers, the specific name from the leaves being produced in whorls, around the very slender and graceful stems. From those whorls the flowers are abundantly produced, supported and suspended by their very slender, thread-like foot stalks. The whole genus is very interesting from the little room they take; their neat, compact habit, the freeness with which bloom is produced, and the long time the plants continue to yield their flowers, somewhat bell-shaped at first, but which become more open and broad as the five petals of the flower expand. With the exception of *T. ericaefolia*, *T. hirsuta*, *T. nuda*, &c., which are respectively, rose, pink, and crimson-coloured, the majority are purple-flowered, and that is the case with the species I have selected as the type of the genus. *T. verticillata* blooms almost constantly when from one foot to two-and-a-half feet in height, and whether the plant consists of a few twigs, or is a bush of a foot or eighteen inches in diameter, when of a fair size, I can scarcely conceive anything more graceful and airy. We should meet it oftener in small collections did it stand rougher treatment. A nice plant always testifies not only to skillful, but to timely and persevering attention. Its state may, therefore, be looked upon as a condition-of-gardening indicator. Let me glance, then, at some of the points to be observed in its culture.

1st. Its Propagation: Time.—Spring and summer are the best periods, when the points of shoots, and better still, some short, stubby side-shoots can be obtained, that will set a little firm at their base, either when slipped off from a larger stem, or cut through at the whorl of leaves.

Preparing Cutting-pots.—This cannot be too carefully done, so as to avoid all risk of rotting and damping. A small pot should be set inside a larger one, and the

* Mr. Beaton's address is Surbiton, near Kingston-on-Thames, Surrey

place for the cuttings prepared with four parts out of five of drainage, and the remaining fifth consist of equal parts of roughish sandy peat, and the other part of pure silver sand, made finish by pressing and watering. Around the side of the inner pot the cuttings should be inserted, watered, and, when the foliage is dry, covered with a cone-shaped bell-glass. In fact, as much attention must be bestowed as was recommended for a tender Heath.

Position.—The best place is a cold frame, or pit, near the glass, with means of shading at pleasure; as even under double glass the young cuttings will not stand the sun; and if far from the glass, they will perish from exhaustion, becoming too weak and drawn to stand upright. As they show signs of striking, they must be kept more light and airy; but if they are very long in rooting, they may have a little sweet bottom-heat with advantage. When struck, no time should be lost in

2nd. **Potting them in small Pots.**—Keep close again for a few days, and harden off again by degrees. As these plants have very delicate fine roots, the soil in which they are grown becomes an object of importance. Where some very good fibry sweet loam can be obtained, a small portion of it may with propriety be used, especially when the plants are of some age and size, as it tends to render the distance between the whorls of leaves less, and thus makes the plant more sturdy and robust. But in every other case, and especially when the plants are very small and young, it will be advisable to give them little or no loam. The main portion should be about two parts of fibry peat, in pieces not larger than pens and field beans, and one part more of equal portions of silver sand, broken pots, and broken charcoal, with the dust sifted out. The soil will thus be open, porous, and easily drained.

3rd. **Growing.**—As the plant blooms at all seasons, it should be kept moderately warm in winter, say from 45° to 50°; but then it must have an airy open position, or it will become weakly and diseased; and care must be avoided to prevent every thing in the shape of drip in dull and foggy weather. In summer, the plant should scarcely ever be trusted out-of-doors; the roots are easily injured, and a reciprocal action between them and the shoots is soon apparent. An airy position is indispensable; but if near the front-glass in summer, the roots will be benefited if the pot is set in a larger one, and the space between filled with moss. As in the case of other small-rooted New Holland plants, when reflecting on the bright sun the branches are exposed to in summer in their native habitats, we are at times apt to forget, first, that in the soil the roots have free pasturage; and, secondly, that the moss, and other vegetation on the surface, keep the soil cooler than when exposed to a fierce sun in a red pot.

4th. **Watering.**—This should be given with great care. The plants must neither be too wet nor too dry. Anything like stagnant moisture from inefficient drainage, or a dry state, such as succulent plants might bear repeatedly with impunity, will soon render them competitors for the rubbish-heap. I have found clean soft water the best. It should not be poured recklessly against the delicate stems. A potted, or an oyster-shell on the surface of the pot, on which to pour the water, will be useful. Let as much be given at once as will reach every fibre; judge when to repeat the dose by the state of the weather, the position the plant occupies, the weight of the pot when lifted, and the ringing or dull sound the pot reverberates when struck sharply with the knuckles. These, and many more, are signs easily acquired by practice, involving handling, it is true; but a fine, gloved gardener, or a practical or amateur, I look upon as I would estimate the value of a mitted pussy.

5th. **Insects.**—I do not think the plant in general is

subject to any in particular; but partly owing to rough treatment, I have nearly lost a fine plant by the attacks of a very small white scale; and if such a thing should appear on a nice plant, I would not advise other remedies, until I had tried dislodging them with a soft brush and weak soap-water.

BEAUFORTIA PURPUREA.—This genus is commemorative of a Duchess of Beaufort. The specific name denotes the colour of the flowers, which are produced plentifully in little round balls. Had we another similar in habit, with the colour of the common *Buddlea globosa*, how nicely the yellow of the one and the violet of the other would set off each other's beauties. Many of the *Beaufortias* are beautiful, but of this section of Myrtle-blooms alone are more worthy of being placed by the side of the *Tetratheca* than the species just mentioned. The leaves are small—not larger than those of the most graceful *Pinelia*—and the plant becomes a bush, and blooms profusely when not more than one foot in height. Though not so continuous a bloomer, the flowers are produced a long time in succession, each young shoot as it grows being furnished with fresh buds. It blooms, also, chiefly in summer and autumn, when the glories of the most of hard-wooded New Holland plants have passed away. If not so graceful as the *Tetratheca*, but it takes as little room, and is even much easier grown. Similar soil will suit it, with the exception that a little more loam may be safely and advantageously added. It is easier propagated from short young shoots getting firm at their base; and though requiring care in watering, is not so quickly injured from a redundancy or a deficiency. It will stand, when necessary, 5° more cold in winter; but the roots, though not equally vulnerable, should not be greatly heated by the sun in summer.

PHENOCOMA PROLIFERA.—An old plant, but still very beautiful when well grown. The difficulty is to get a compact specimen; there seems always such a tendency to get upwards at the expense of being bare, or bandy-legged. Fretting and striving after upwardism is to be found elsewhere than in plants. What social ills are not to be found in its train? Those who wish to grow this kind of the everlasting (for the genus *Aphelers*, and *Helichrysum*, are neither of them far removed from it), must commence aright with a dwarf, compact plant, a few inches in height, from the nurseries. The uninitiated would prefer, for the same money, a plant with one or two brownish stems, and from a foot to eighteen inches in height. It is a hopeless case. True, the plant will bloom at its points year after year, but no twisting, or managing, will make it a nice, pretty, regular specimen. If such a young, bushy, dwarf plant cannot be obtained, and without vigorous stopping and training the youngest will soon become lanky, the best plan would be to commence with a few cuttings, which are easily procurable from the numbers of stiff side-shoots that are always found clustering round the stem. They require much less care than the *Tetratheca*. If placed in sand, with a bell-glass over them, they may even be set on a shelf close to the glass, and will merely require shading when the sun is very intense. I have had them strike freely without shading at all. When potted off, the stopping and training of them out should be the chief thing. Two parts turfy pit, one of fibry loam, and one of sand, broken pots, and nodules of charcoal, will grow it admirably. The roots are not particularly sensitive, as respects heat or cold, but will stand considerable extremes; 45° in winter, and 70° in summer, will be a good medium temperature.

R. FISH.

CONIFERÆ.

ARAUCARIA.—This fine assemblage of plants, so remarkably different from any European trees, is so

named from the *Araucanos*, a nation inhabiting that part of Chili, where *Araucaria imbricata* grows wild.

A. Bidwillii (Mr. Bidwill's *Araucaria*).—Native of New Caledonia, an island in the Great Pacific ocean, and Moriton Bay, in Australia. This is a beautiful tree, rivaling in symmetry of growth its better-known congener, the *A. imbricata*. Messrs. Henderson, of Pine-Apple-place, imported a large case of this fine plant lately. One of them measures nearly four feet high, and is growing rapidly in a pot in the open air. We much fear it will prove too tender to bear the rigours of our moist winters. In its native country it is said to reach the height of 150 feet. As a conservatory plant it is very handsome.

A. Braziliens (Brazil *Araucaria*, or Pine).—Average height, 70 to 100 feet. The wood of this Pine is heavy, and close grained, and is very useful to the Brazilians for making various articles of furniture. In this country it will only live in the most favoured parts of the island. No doubt in the South of Europe it would thrive and form an useful and ornamental tree. There are two or three specimens at Dropmore that have attained the height of thirty feet, but they do not look happy, and require protection in severe winters. *A. Bidolfiana* is a variety that when young very much resembles the species, but is said to put on a different appearance when old. There is also another variety named *A. elegans*, with the foliage very densely set upon the branches. It has a graceful, drooping habit, but very little is known of these two varieties. We possess a good plant of the latter, about two feet high, well branched, and with an elegant drooping habit. Whether these varieties will prove more hardy than the species remains to be proved.

A. Cunninghamia (Mr. Cunningham's *A.*, or the Moriton Bay Pine).—This is a very handsome tree in its native locality, frequently rising to 100 feet high. It bears a considerable resemblance to the *A. excelsa*, but the foliage is more prickly, and of a darker hue. The timber is said to be excellent. Near the south coasts of England it grows and thrives well, but in the more inland parts it requires protection through winter. In the lofty conservatory it forms a handsome ornamental tree.

A. excelsa (The lofty *Araucaria* or Norfolk Island Pine).—Native of Norfolk Island, and New Caledonia. It reaches in its native islands to 120 feet high. It is of an upright habit, the branches surrounding the stem at regular intervals, in a systematic manner. Whilst young they are horizontal, but as they advance in growth become drooping at the extremities. Being so very ornamental, it is much to be regretted that it is too tender to bear the open air in this country, even in the warmest parts of the island. In Italy, or the South of France, perhaps, it might live and thrive. Here we can only make use of it as a cool conservatory plant, for which it is admirably adapted. In such a building as the Crystal Palace, at Sydenham, it would have room to expand and show forth its almost regal dignity. And this is one amongst the many objects for which such a building is the proper arena.

A. imbricata (The Imbricated-leaved *Araucaria* or Chili Pine).—Average height, 120 feet. We have already written much in praise of this truly valuable tree—valuable both for stateliness of growth, and for its utility. It is decidedly the most remarkable of all Conifers, and its well-proved power to bear our most severe winters is one of its qualities that strongly recommend it to the British planter. Seeds are imported in large quantities, and they readily grow with very moderate care. Hence it will soon become cheap enough to plant it as a matter of profitable outlay, especially when its useful qualities are more fully understood. The wood is strong and good, and it is

full of beautiful streaks of rich colours, and is capable and worthy of being worked upon by the cabinet-maker. The seed, too, is useful as an article of food. The natives roast it as we do chestnuts, to which its taste bears a strong resemblance. Every way, it is a most desirable tree. So far, however, we have only made use of it as an object of ornament, and there is no tree or shrub that commands more admiration. Whether the seeds will ripen in our climate we have not yet ascertained; but we have seen several cones on the one in the Royal Gardens at Kew, and we hope, when the trees attain the proper age and size, that desirable object—the ripening of the seed—will be attained. The grand use, at present, to which this fine tree may be applied, is to form avenues to the various mansions of the nobility and gentry of this country. This has been done already, as we mentioned previously, at Elvaston, and at Chatsworth, and when these have attained a certain size and character, no doubt they will excite others to employ them for the same purpose. Also, as single trees on the lawn, or in the park, they form fine objects; but in such situations they should be planted young, and guarded from injury by cattle or game for several years, and should not be shaded by other trees.

(To be continued.)

ROSE CULTURE

(Continued from page 31.)

RAISING NEW VARIETIES FROM SEED.—Due attention having been paid to hybridising, protecting those flowers that have been operated upon from bees and birds, and the season having duly ripened them, our next head is—To gather the seed as soon as it is ripe, cleanse it from the pulp, and keep it perfectly dry, but cool, till the sowing season arrives. This rule scarcely needs any further explanation; but in order to render our instructions practical and complete, we shall dilate upon it a little.

The seeds are generally ripe enough when the hips become red, or rather scarlet, though many kinds never attain the highest colour, but rather a kind of brownish yellow—indeed, the colours almost vary as much as the fruit of the apple. The ripening, then, must be judged of by the outside beginning to shrivel; soften it never will, like the peach or the plum; but it will soften to a certain degree, so much so as even to be moveable if squeezed hard. Whenever it is adjudged to be ripe, gather it immediately, and put the hips into a vessel filled with milk-warm water. Take hold of each hip, and crush it into pieces, separating as much as possible the hard lump of seeds. When all are crushed, agitate the water considerably, and pour off gently all the skins and pulp. You will find each seed imbedded in a kind of hair; this must be got rid of by frequent rubbings, adding fresh water to carry it off. Continue these washings till the seeds are quite freed of the skins, pulp, and hair; then pour them into a fine sieve or cullender, the mesh or holes of which are too fine to allow the seeds to pass through, but will allow any remaining pulp to wash away. Then set the sieve in the open air for a few hours till the seeds are perfectly dry, give them a rubbing between the hands, and wrap them up in paper, or put them in a fine canvass bag. If in paper, put them away in a drawer, in a cool room, till spring; but if in a canvass bag, which we think is the best, hang them up in a room where there is no fire, but well dried by draught of air every day. In this place keep them till the end of February, examining them occasionally to see that no mould nor vermin has attacked them.

When that time arrives, fill some wide pans with a mixture of loam and leaf-mould—two parts of the

former to one of the latter—draining them well previously. Press the soil down gently and evenly, and upon it sow this carefully-prepared seed, rather thinly. Set these pans either upon a platform in the greenhouse, near to the glass, or upon a very gentle hotbed covered with glass. Give air on all favourable occasions, and be particularly careful, when the plants begin to appear, that they are not subject to a damp atmosphere, for if they are, they are almost sure to fog off. This serious evil may be prevented, by covering the bed with dry coal ashes, which will absorb the damp partly, and by giving abundance of air to carry off the remainder. The great aim should be to keep them healthy, and growing them as slowly as possible, to induce a dwarf stockiness to the plants. As soon as they have become two inches high, and the weather is sufficiently warm and mild, set the pans out-of-doors for a week or two, shading them from violent sunshine till they have become inured to the full light, as well as the full air. They are then ready to be operated upon, according to Rule 5, which says, "As soon as the seedlings are grown a few inches high, and the weather will permit, plant them out in a nursery bed, in a carefully-prepared soil—neither too high nor too 'cavy'."

Pruning the Ground, by first (if it is not naturally dry), exactly draining it, if that can be easily done, but if not, by raising the surface of the bed above the surrounding level five or six inches. The sides of the bed may be formed with either slate, or brick, to hold up the soil close to the edge of the bed. The soil should be strong loam well enriched with very rotten dung; press or tread it down pretty firmly, and then bring out the seedling roses, one pan at a time. Commence raising the plants at one side with a small trowel, then make a mark across the prepared bed, and put in the plants in a line with the mark, planting them at six inches apart. When the first row is planted, make a second mark or line across the bed one foot from it; plant it the same as the other, and so proceed till they are all planted; then give them a gentle watering, and shade them for a few days with sticks and mats thrown over them till they make fresh growth. They then want no more attention that summer, except keeping them constantly weeded, and the surface stirred occasionally, to prevent moss growing, and baking and cracking with the drought of summer. As they advance in growth and begin to assume a character, look them over, and any that by foliage, or any other mark, denote a difference and show an improvement, let buds be taken from such about August, and insert them either into the common stock in the usual way, or three, four, or more, may be put into some rose bush, of any kind, with characteristic marks similar to the seedling; that is, if the seedling is of a stout habit, like the Gallic tribe, put the buds into one of similar habit and class; but if weak-growing, like the China, or Tea-scented class, bud it into one of them. The reason for this precaution is obvious; the strong growers should be worked upon strong growers, or they would overpower the stock and eventually perish; and the weak growers upon strong stocks would never be able to take up the abundant flow of sap from such a strong stock and such a necessarily large stock of roots. Proportion, then, the apparent habit of the seedling to the habit of the stock, and they will work together harmoniously. And this agreement in strength of stock and scion is necessary to be observed in budding or grafting any roses, whether seedlings or not, though the advantage, in a slight degree of strength, may be allowed to the stock in preference to the scion. The seedlings, after the buds are taken from them, must not be destroyed till they have blossomed, as sometimes the most unlikely in foliage, habit, or strength, produce good roses; the budding of any being only done to accelerate blooming of the buds so removed. If they bloom sooner,

they are soon proved, and if found worthy, may be then rapidly multiplied; or if worthless, are the sooner dispensed with.

T. APPELBY.

(To be continued.)

OCCUPATION OF VACANT GROUND.

The season has now arrived when several of the summer crops, as *Peas*, *Cauliflowers*, *Early Turnips*, and sundry other things will have reached, and gone past, that state of perfection which fits them for table, and may be at once removed. In fact, we advocate their being cleared away as soon as ever they are superseded by other crops, or are no longer fit for use. This being accomplished, either in whole, or piecemeal, then comes the question, what is to be done with the ground they have been occupying? Usually, circumstances determine that question in a manner against which there is no appeal, but often some discretionary power is vested in the cultivator.

The deep-thinking gardener, whose plans were laid long ago, will tell at once what profitable crop may, with advantage, be now introduced to occupy the vacant ground. With him the change is as familiar as the periodical return of the twilight and dusk after the heat of the day; he had arranged, in his mind's eye, a certain course of rotation which seldom gets marred, unless by accident; and certainly there are such mishaps; but, then, he is as likely as any one to remedy these misfortunes, and turn them to the best account. With him, therefore, we have less to say; our duties lie more with the less-experienced class; and as we have all along advised the space between rows of *Peas* to be planted with *Broccoli*, or some other of the Cabbage-worts, we will suppose that to have been done, and all that is wanted then is to clear away the crop when done with, dig or stir the ground where the row has been, as well as the intermediate spaces; also where the treading, inseparable to the gathering of a crop, may have rendered it hard, close, and unkind, and at the same time filling up any gaps in the crop. Little more can be done until the plants shew symptoms of growing away with vigour, when the application of liquid manure will be of great service; but in the early part of a plant's career, we think it unnecessary, or even hurtful, while, at the time a plant is in a vigorous growing state, it absorbs such grateful food in almost any quantity; we, therefore, say to those who have such crops to manage, to improve the growth of them by surface-stirring the ground, thereby encouraging a healthy action, rather than that gouty, gluttonous one resulting from an over-dose of manure water.

Now for the ground vacated by the *Cauliflower* crop: and may not this be planted with *Broccoli* too, seeing that such a large breadth is wanted? To this we have several objections. The Cabbage-worts do not like to follow each other, although they are by necessity very often made to do so; but when it can be arranged otherwise, another crop ought to follow, or intervene between. *Celery* comes in very well that way, and so does *Winter Spinach*, and similar crops; the most important, however, being *Celery*; but whether this, or any other, dissimilar crop from the one removed be decided upon, the ground ought at once to have a good digging without any delay. Much as ground benefits by the rest it receives in the growing season with no crop on it, that benefit is much enhanced by the free access of air to all its parts; therefore, to clear off a crop, and then rake the hardened ground to such a smooth, fine surface as almost to make it appear improper to set foot on it again, is bad gardening. Pretty as it may appear to the eye, it is sealed up against the beneficial influences of the atmosphere, so that it can hardly be expected to

improve by those external circumstances which give fertility to the earth, irrespective of the artificial means used. It is needless to say that a good dunging will be also of service; only, when *Celery* is expected to follow, this dunging had better be reserved for the trenches it is to occupy, when it may be used pretty freely. It is almost too late now to expect a crop on the ridges, yet a few *Lettuce* plants may be put there, provided the weather be favourable for their removal at the time, and the plants good. Of course, the *Celery* ought also to be planted without delay, and everything conducive to its welfare attended to hereafter. We have, on former occasions, detailed our practice in growing this vegetable, so that we have in reality nothing now to add, beyond that the earthing-up of the most ferocious kinds ought to be done before waiting so long as was recommended by some cultivators years ago, and still followed out yet by others. This system, though not without its advantages, is, we think, open to many objections. A *celery* trench is seldom anything more than an oblong trough, which soon becomes intersected, by the roots of the plants ramifying through it in all directions. Now this can hardly be expected to resist the dry weather we often have at this time, consequently, food in a liquid state ought to be added, and its escape from thence, by evaporation, guarded against by a slight coating with fresh soil, which will answer the purpose of blanching the *celery* as well: watering with liquid manure need not cease with this first earthing up; on the contrary, it may with advantage be repeated as long as the vigorous growth of the plants indicates its want of such stimulating food, when it may be discontinued, and the plant allowed to consolidate itself, in order to be better able to stand the winter.

Considerable quantities of *Lettuce* and *Endive* will also want planting out now; and as the brocoli, and other crops analogous thereto, will absorb all the space formerly bearing peas and beans, some spot having recently had cauliflowers, or other similar crop, may be planted with this crop forthwith; while ground vacated by early *Potatoes* may have the crop of *Winter Turnips* sown at once, the weather and other circumstances permitting. The kind most suitable at this time are the *Early Stone*, or some kindred hardy sort. Rich ground is not at all necessary for *Turnips* for household purposes, as they are more firm, and stand the winter better, when grown on ground less stimulating. The sowing of these must not be delayed longer than the middle of the month, under any circumstance, otherwise the chances are that a crop of leaves will be the only reward you will have for your trouble.

In fact, we have written enough to make our meaning clear, that all unoccupied ground should be at once put under some crop or other, when ulterior objects do not dictate some part or other of it remaining empty some little time longer. *Onions* to stand the winter will have to be sown soon, and some favoured spot selected for them must be retained accordingly. The principal supply of *Cabbages*, *Winter Lettuce*, &c., are also generally sown about the 12th, and by-and-by plantations of them will have to be made on some well-selected border or other place. Therefore, in planning the various products to their respective positions, due regard must be had to any important ones quickly to follow; otherwise, in a general way, the requirements of a family render it necessary to plant another crop immediately the preceding one gets cleared away; and as the growing season is fast hastening to a close, that duty must not be omitted for the otherwise necessary one of putting a decent appearance on places often visited by company.

J. ROSSON.

POULTRY OF THE CALAISIS AND THE ARDRESIS.

THE Calaisis, the portion of the department of the *Pas de Calais* nearest to the English coast, supplies the London market with an immense quantity of poultry; but it likewise claims a little of our notice on other accounts. The long period during which it remained a valued part of our dominions, shows that, having got something worth having, we were careful to keep it. Elizabeth fretted sorely at the loss of the Calaisis; which, in fact, is a compendium of many good things. It abounds with excellent building materials—stone, lime, and sand, with turf (a great blessing to the poor), and wood, where the land is not better employed. Close by, there is iron ore, and, as at Hardingham, coal, though in no great quantity; but they are now making search for it at Graines, and at Hammes, which gives the hint that Kent, whose geology is almost the counterpart of this, may possess it also. In the uplands, the soil produces rape, wheat, beans, and barley, in abundance, and many other things to match, hops included. The alluvial soils are almost fertile in flax, oats, hemp, &c., besides all sorts of garden vegetables, which, in consequence of the climate, the industry of the people and the good ground they grow in, are cheap and abundant, as well as in great variety.

There is not a little, which, during a walk in the upland, would strike an English farmer as remarkable, perhaps unobvious. In the first place, there are no hedge-rows, not hedge-row timber. The land is all cultivated, in that respect, on the same principle as at the model example farm at Whitfield, by Mr. Morton. It is contrary to the local laws of many departments to plant a high-growing tree within a certain distance of your neighbour's property. The oaks and ashes which suck the vitals out of so many of our farmers short-leased fields are here unknown. The next door squire who should stick them in along his own boundary, to your detriment, would commit a preventable nuisance. Nevertheless, there is plenty of wood in the country, but it is all collected in woods and forests, many of them of considerable extent, stretching for miles in length and breadth. The road side elms can hardly be reckoned an exception, as the intervals between them are not choked up by hedge-rows. The result is, a great diminution of the number of weeds and insects. For some weeks, I could not very easily find a bit of groundsel or shepherd's purse, to tempt Madame Dubois's trained siskin to go through his little performances. Permanent home pasture, gardens, orchards, and such like, are alone enclosed by white-thorn hedge-rows; and those are planted, not on the tops of earthen banks, which it is impossible to keep clean, but in the level ground, and in a single row of plants. The white-thorn hedge can thus be carefully cultivated; the young and weak stems are supported and trained almost after the fashion of espalier fruit trees, and the earth at the roots on each side of the hedge forked over, and the weeds got rid of. The hedge, in fact, thus grows in a narrow bed of garden mould. All this, it will be said, is very troublesome; but it is very neat, and very business-like. The rest of the country remains open and unenclosed.

Many people would not at first like the sight of this undivided landscape, bounded only by distant forests, rising down, or the far horizon of the sea. But to others, who love to breathe a free air, it soon becomes very attractive. There is no occasion to peep over your neighbour's hedge in order to spy out what he is doing; with eyes good enough, you could perceive his very motion at the distance of miles.

Another thing which would astonish the English agriculturist, is the immense number of mole hills scattered over both the meadows and the arable lands. Moles are encouraged, rather than otherwise. The farmers say they do a great deal of good, and that without them, wire-worms and grubs would be productive of serious injury. The abolition of hedge-rows does not exterminate all noxious insects, the cockchafer being one of those that escape; and after having lived four years in the grub state at our expense, every cockchafer costs a great deal more than it is worth. It should have been premised that there are no rooks in the Calaisis, nor, I believe, in its neighbourhood; why, I know

not. Whether it is that they do not like what Cobbet calls "the beastly trimming" to which all tall trees, with scarcely an exception, are subjected, or whatever the cause may be, rookeries are *desiderata*. The *Corvidæ* are represented by hooded crows, during their season, which, however, mostly keep to the sea coast, and feed on marine waifs and strays; by jays unusually impudent and cunning, which seldom travel far beyond the forests; by carrion crows, which prow! all over the country in pairs, laying hold of whatever they can happen with; and most numerously by magpies, tanner, and more constantly in sight than I have ever beheld them. Not even Cornwall can match the Galais for magpies. One village, Pihen, derives its name from *piés* and *heign*, according to the annalists; *Pihen* signifies *habitation des piés*, or home of the magpies. But on almost every clump of tall trees, especially in the neighbourhood of dwellings, is to be seen the rough bunch of sticks which indicates the solitary nest of the magpie. Ravens, doubtless, are to be found in the French forests, but one sees or hears very little of them. Of all those *Corvidæ*, the magpie is by far the busiest and the most useful in the destruction of insect vermin; but its numbers are still insufficient to compensate for the absence of rooks. Hence the acknowledgment of the services rendered by the mole. The give-and-take arrangements of nature are never better illustrated in our eyes, than when, from some cause or other, the balances of power to which we have been accustomed, are interrupted.

(To be continued.)

WHICH VARIETY IS MOST PROFITABLE?

HAD I seen Mr. Wingfield's paper on poultry before sending you my last letter, you would have been spared the insertion of a second paper on the same subject. As it is, I hope you will find me room for a second "crow," though not one of "defiance." A fairer or more straightforward expression of opinion than Mr. Wingfield's is could not be, and if I venture to dissent from his judgment—as to the comparative merits of some sorts of poultry—it is from an idea that when "doctors differ," friendly discussion will ensue, and that so, what I believe is our mutual object—that of improving poultry—will be forwarded.

With regard to *Spanish*, their price is at present an objection; but after this year that will be very much reduced. I can safely say, I have not found them "difficult to hatch and rear," having actually had more success with them, in proportion, than with any other breed of poultry. I have reared from 150 to 200 chickens with very few casualties. From the number of applications for chickens I have had from Cornwall poultry-fanciers, I am inclined to think they are fully alive to the merits of Spanish fowls.

I now come to *Dorkings*, which, I agree with him, "are not remarkable layers;" perhaps I might even go farther than this, and say they are not good; but they are undeniably good as *table fowls*, and good nurses. Except "White Dorkings," I cannot complain, from my experience, of "their great delicacy;" but I quite agree with Mr. Wingfield, "that they require a constant and judicious intermixture of fresh blood."

I should be glad, by-the-by, if any of your correspondents would inform us whether, as regards Dorkings, the same thing has happened to them as to me. Last year I found that of my most carefully bred broods, though the chicks resembled each other in feather, many were without the fifth toe. I concluded this was my fault for breeding in, and that fresh blood was wanting. I obtained fresh blood, putting my old cocks with new hens, and *vice versa*—in spite of which, this year, out of 120 chickens, I have many of my best without the fifth toe, thus disqualifying them for an exhibition. I have not remarked the difficulty in the Dorking chickens' escape from the egg which Mr. Wingfield describes.

With regard to *Cochin-Chins*—agreeing as I do in many of the points brought forward in their favour by their very able advocate—I still remain of the same opinion, "that they do not make up, by their superior laying qualities, for the quantity they eat, in comparison with other good layers, such as Spanish, or Polish." Mr. Wingfield does "not think them large consumers of food," and speaks highly "of the quality of their flesh." On these points, we differ;

and, wishing to put this to a fair test, I will relate a conversation which took place a few days ago between me and my gardener (the same man whom I quoted in my last letter).

"Well, Thomas, as you are just married, Mrs. — wishes to make you a present of some fowls, for supplying you with eggs; but you are to keep, not sell them. Which will you have—Cochin China or Spanish?" "Well, sir (was the answer), I've a great fancy for the *Cochins*, they're such very tame things; but they eat too much to make money: Spanish, if you please, sir." I asked my poultry-woman her opinion (and she has had much experience in poultry), and her verdict was the same. One of the garden-men, who stood by and overheard her, remarked, "Then fowls (as fowls) won't pay a poor man; they eat too much, lays too small eggs;—though I reckon they're good uns at it; and folks don't like eating them (the fowls); they say they're like parrots." I am sure John never ate a parrot, though his master owns to having done so, and a nasty thing it was; so that the comparison (to say the least of it) was odious.

It is fair to add that I keep my *Cochin-Chins* at home, under the charge of these people—the Spanish being at a cottage, under separate care; so that in these expressions there was no *fancy bias*. Filthy here was the thing considered; and it was this, and this alone, which formed their judgment.

Thomas again, yesterday, drew my attention to their eating powers, by the expressive remark of—"Eh! see, master! what chaps them be to eat!"

I have never tasted *Cochin-Chins* but once; then my opinion was not in their favour, and in this the four or five who were dining with me agreed. We thought the flesh coarse and stringy. The victims were two cockerels, taken indiscriminately from the flock. They were nearly four months old, and weighed five pounds, and just under five pounds, respectively. There was a great laugh at me about "my *guinea birds*," which were to be roasted, and which, when they did appear (with their legs cut off by the scandalised cook, as if they were boiled, to make them shorter), did, I must confess, look very "stilty."

I do not go the same length as my friend Thomas, and declare them "parrots;" but I did not think them comparable with Dorkings. However, my wife declares we must have some more "guinea birds" killed; so all I say is, "Better luck next time."

With Mr. Wingfield's opinion, as regards *Malays*, I quite agree. I tried, and gave them up. I consider *Cochin-Chins* superior to them. Beautiful as they are, *Gamir* fowls will not pay the cottager.

I acknowledge the delicacy of the *Polish* fowl, but I should be inclined to place them in the scale, as layers, very far before the *Hamburgs*.

What I had heard of the *geese* at Birmingham had led me to the same conclusion as Mr. Wingfield. I have now eight young geese, from a Toulouse goose and large English gander; and as my attention was drawn to the weight of the gander and two geese who won the prize at Lewes (weighing, at fourteen weeks old, 40 lbs.), I weighed three of my geese, who, at the age of ten weeks and two days, weighed 37½ lbs. gander, 12½ lbs.; geese, 11½ lbs. each. I may add, that these geese were not fed up and prepared for exhibiting. I am convinced that much may yet be done towards improving geese and ducks by judicious crosses.

I must apologise for troubling you with my opinions; and I trust Mr. Wingfield will excuse my differing from him, as I believe our object is the same—that of arriving at "what breed of poultry is likely to prove most profitable to the farmer and the cottager."—G. L. A. S.

TO CORRESPONDENTS.

BUDGING ROSES (Evesham).—To argue that because we top a shoot to encourage side-branches we ought to top a newly-budded one to encourage the growth of the bud, is to believe that as soon as a bud is inserted and tied, it is capable of action as any of the natural buds;—an untenable doctrine in the middle of the nineteenth century. To say that if you "tip" the shoot of a wild rose the sap ceases to flow in it, is quite wrong; it flows enough to support inserted buds.

BEDS (Maurandya).—The sudden change to hot weather at the beginning of July has caused your plants to grow too fast without showing much flower; and to stimulate them with artificial manures would only

cause them to grow stronger and more barren of flowers. Train and peg down the *verbena*s, but do not stop any of the shoots yet, rather train them over each other till you have a good bloom. The *Knautia maccurpae* will train itself, but as the roots are weak, and have been planted this season, you had better fasten down some of the shoots here and there to steady the plants. In another ten days or a fortnight you will see a great change for the better in all the beds.

MELONS (*A Constant Reader and Subscriber*).—You have not stated the necessary facts; but it is a fair inference that yours is a house, for you speak of flues, &c. What pity it is that our worthy friends do not, in their queries, give the *data* as well as *desiderata*. The simpler questions are put the better, and as far as possible free from verbiage, but still facts must be stated. The dimensions and character of your house would have enabled us to give a satisfactory answer. A tank confined in a chamber, the latter having sliders on its facings, to allow a graduated escape of heat and air-moisture would be good, and act in conjunction with a source of atmospheric heat; the latter occasionally indispensable. As to sorts, we say, first of all, the *Green-fleshed Egyptian*, such as those exhibited at the June and July shows, at Chiswick, by our friend, Mr. Collinson, of Eaton Hall, misprinted Exeter Hall, in Mr. Errington's article of July 22nd. Next, we could place *Stew's Green-fleshed*; then *Bromham Hall*; then *Terry's*; and, if you can add some of Mr. Fleming's *Hybrid Persians*; but these want more tender treatment.

POTATO-CULTURE.—*B. slys*.—"On a piece of ground, fourteen feet by seven, I dug fourteen holes, arranged thus—

and having placed a potato set and some manure in each hole, when the stalk required it, I continued to bank the clay round it, until each resembled a small mole-hill. I have this morning lifted them, and found 56 lbs. weight of tubers. The potatoes were not planted until February, and they were cut down in the height of the growing season by the disease. Had they been permitted to come to full maturity, I doubt not but that the produce would have been very large."

PINE-APPLES (*An Attentive Reader*).—Your produce (49½ lbs.) from 18 plants, if they are of the Queen variety, is very good indeed. We are glad that "although you never lived at a place where pines were grown," you have succeeded by attending to the directions given in our pages.

SCARLET RUNNERS (*W. Moore*).—These are perennials; and it has long been known that if the stems be cut down at the beginning of winter, and the roots are thickly covered over with coal-ashes, so as to preserve them from frost and excessive wet, they will throw up fresh stems the following year. However, being so easily and so cheaply raised from seed annually, such treatment is never adopted.

COCHIN-CHINA CHICKENS (*A Constant Subscriber*).—These being ten weeks old, are just of the age when they are usually "with scarcely a feather to cover their nakedness." After this age, if they are kept warm and fed generously, they speedily become covered with feathers. The food you supply them with is very good; but our Cochin-Chinas prefer oats to barley, and it is in some respects better for them.

PINE-GROWING.—*An Essex Farmer* will have his wishes attended to very soon.

WOODLICE (*A. J. V.*).—There is no royal road whereby to make these vermin march off from your melon-bed. We have found gas-lime strewn over the soil, but so as not to touch the plants, check their forward; and we have trapped them in hundreds, by putting a fresh slice of potato under some moss in a garden-pot laid upon its side; but, we believe, the most effectual and ever-vigilant subduer of them is a toad. One or two of these much-abused animals will clear a frame very shortly of woodlice, and keep it clear.

WHITE COCHIN-CHINA FOWLS.—*A New Subscriber* may write to Mr. G. C. Peters, Charlton Cottage, Moseley-street, Birmingham.

HEATING CUCUMBER AND MELON PIT (*A Subscriber—Attercliffe*).—Write to Mr. Pannell, Leicester, for an estimate for heating it with his hot-water apparatus, and tell him your difficulties.

PURE COCHIN-CHINA FOWLS (*A Constant Reader*).—These have no "scimitar tail feathers." Some were shown at Lewes which had these naturally, and were disqualified, although their owners had cruelly and unfairly plucked out those objectionable feathers.

COARSE GRASS ON LAWN (*Simples*).—No treatment will convert the coarse species of grass into fine-leaved species. You had much better pare off the turf next February, burn it, and spread the ashes over the soil, point them in, and sow Meera. Sutton's mixture of lawn-grass seeds, as you suggest, and then roll all smooth.

TRAPCOLUM TUBEROUSUM (*Ibid.*).—This blights at the end of August. Our correspondent says:—"I have one which, if I may judge by comparing it with some I have seen here, is a fine one. I have pinched off the tops at about eight feet high, as it has got above my wall, and would go into the next garden. It is grown on a trellis, and is very luxuriant. Had I known its expansive powers, I would have provided a wider one. I think it would have covered a trellis two yards wide with ease. It may interest some of your readers to hear that of this plant I tried two cuttings; for one of them the soil was manured with wood-ashes and other things, for the other with charcoal. Both grew very well; but the charcoal one, though the smaller and less promising of the two, speedily shot above the other—its leaves are also much larger and darker. From this, I am induced to think that charcoal suits this plant, and the more so, as I put a good lot of charred sticks in the hole when I planted the tuber."

TAKING HONEY.—*A correspondent (R.)* says:—"Will you call the attention of your readers to the method of taking supers, detailed at page 278 of your 5th volume. Having tried it myself for two seasons, and having found it invariably succeed (for, as I mentioned at page 71 of vol. vii., I consider my only apparent failure a proof of success), I

should like to see it more generally tried. Though my continual recurrence to the subject may seem somewhat egotistical, I must plead my desire to extend the knowledge of my accidental discovery as my apology. This morning (July 31) carried off another glass of honey by the method above referred to. There were four or five bees and about ten drones in the glass. These latter gentlemen do not seem so anxious to rejoin their queen, as in gallantry they ought to be."

ORANGE JELLY TURNIP (*J. Lester*).—Apply to Mr. Chivas, Seedman, Chester.

PINE-APPLES AT HIGH TEMPERATURES (*An Amateur*).—"In 'very bright seasons, that is, when the light approaches to that of the tropics, then high temperatures may be employed, not only without injury, but beneficially; but in the far greater number of seasons, and in the greater part of the season of a pine's growth, no such amount of light occurs, and then high temperatures are injurious; they promote growth, but the growth is not accompanied by excellence of flavour in the fruit, nor a maturity of growth in the stalks, so that these will not yield such good fruit in their turn as if they were less forced but more matured growth. We are always ready to reply to questions."

COCHIN-CHINA FOWLS (*Rev. J. S. L.*).—"You may very reasonably expect success in keeping these on your fawn near Lutterworth. We know they are so kept much further north. They do not require coddling; indeed, their native place, Shanghai, has severer weather in winter than we usually have in England. The most perfect form of Cochin-Chinas is just as free from legginess as the Dorkings. We shall be glad to aid you into the right road if we can."

DISEASED PLUMS (*T. S.*).—"We are of opinion that your ill-success is chiefly the result of the ravages of the plum aphides. You have not stated whether they have been thus attacked or no. We have a tree or two this season, which, in former years, bore the most perfect fruit, producing fruit precisely like yours. Few persons, even gardeners, estimate sufficiently the damage these insect vampires are capable of producing. Only look at the damage they can accomplish on a hop plantation. It will be found, too, that adhesive and bound soils are incentives to their attacks. Such soils, by their incapability of affording a lively root-action of a continuous character, induce a torpidity in the action of the ascending sap, and the consequence is, the accretive matters present become highly concentrated, thickened, and sweet; and thus a source of high nourishment to these depredators, which thrive and multiply under such circumstances beyond all ordinary conception. Such is our opinion, the result of many years close watchings; and we would advise you to replant totally in the end of October, using an entirely different soil: a light sandy loam, planting on the ground level or above it, and introducing half-decayed vegetable matter liberally with the soil. Your Derbyshire clay will bear a heavy admixture with sand; it is your mechanical texture that requires altering."

ALSTROEMERIAS (*Sarah*).—"When their stalks ripen and dry, the roots ought to be taken up, dried, and replanted six inches deep, in October, when, with a slight protection in winter, they will live out very well, if the soil is not too wet at the bottom."

ANEMONE SEEDLINGS (*Ibid.*).—"The seedlings in the pots had better remain as they are till the leaves die down, then free them from the soil, and go on with them as old roots."

DIKLYTRA SPECTABILIS (*Ibid.*).—"It will not bloom after this time. When it dies down in the autumn, keep the pot in a dry place over the winter."

GLADIOLUS SEEDLINGS (*Ibid.*).—"Give same treatment as Anemone seedlings."

BROMPTON STOCKS (*Ibid.*).—"Those sown last spring may be planted out now where they are to flower, or any time this autumn, before October."

CLIANTHUS (*Hampshire Housewife*).—"Your Clianthus is covered with red spider, and not with the white blight, and if you were to kill all the spiders to-morrow it would not mend your case this season, because the virtue of all the leaves is quite gone for this year, and you may as well strip them all off at once, or you may let them remain till October, and then close prune the plant, and cover the shoots and stem in a pint of sulphur, as Mr. Errington says for the vines. It is not too late to sow the *Campanula carpatia* for next year, if you can keep the seedlings through the winter. Sow one-half now, the rest next March, and let us hear the result."

ADIANTUM CAPILLUS VENERIS (*Ibid.*).—"Housewives might call this the Maiden Hair Fern. We have gathered handfuls of it in March and April from under the edges of snow wreaths in Scotland, to kindle fires with to set the heaths "a low," therefore, there is no doubt of its being able to stand out in summer, and in winter too, in any place in England. We trust the beautiful little Maiden Hair Fern will succeed with you in Hampshire. Keep it in the shade, as you propose, and near water, if possible; a damp atmosphere, and never to see the sun, are conditions natural to it."

ROSE SPORT (*A Constant Reader*).—"No one knows the real cause of, or a remedy for, roses coming like yours. If the stock is healthy, but it immediately with some other variety."

DEVONIAN will be specially attended to next week.

NAMES OF PLANTS (*W. S.*).—No. 1. *Berberis aquifolia* (Holly-leaved Berberry). The berries would form as good a preserve as those of the common Berberry. No. 2. *Cotoneaster microphylla*. No. 3. *Complanis asplenifolia*. No. 4. *Escallonia rubra*. (*Amateur Geranium Grower*).—Your *Pelargonium* is *Ajas*. (*M. J. P.*).—Your plant is *Diplazium glutinosum*, formerly called *Minulus glutinosus*. (*A. M. C.*).—Your tree, at Barning, is the Red-barked elder, *Sambucus racemosa*. (*H. B.*).—No. 1. *Phlomis frutescens*. No. 2. That curious plant, *Salsiburnia adiantifolia*. No. 3. The Silver-striped variety of *Edomys japonicus*.

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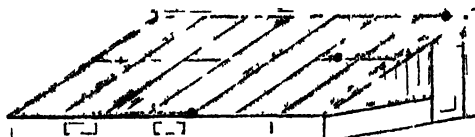
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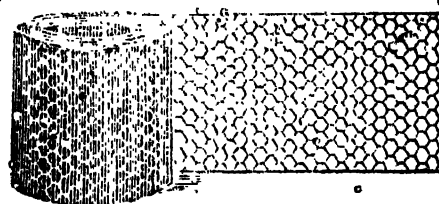
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WEEKLY CALENDAR.

M D	W D	* AUGUST 19—23, 1855.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bef. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
19	Th	Common Tansey flowers.	30.355—30.317	73—45	E.	—	54 a. 4	13 a. 7	9 18	4	3 30	232
20	F	Bull's shrill autumnal noise.	30.294—30.153	82—60	S.W.	—	55	11 9	41	5	3 28	233
21	S	Sun's declin., 12° 0' N.	30.119—30.003	79—64	S.W.	—	57	9 10	6	6	2 57	234
22	Sun	11 SUNDAY AFTER TRINITY.	30.012—29.935	63—57	S.W.	—	59	7 10	37	7	2 35	235
23	M	Baham flowers.	29.870—29.849	76—59	S.W.	0 P	v	8 11	15	8	2 21	236
24	Tu	St. Bartholomew.	29.870—29.781	73—46	S.W.	18	2	8	morn.	9	2 8	237
25	W	Soapwort flowers.	30.160—30.044	71—41	N.W.	—	3	9	0 2	10	1 49	238

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 71.5° and 50.5° respectively. The greatest heat, 83°, occurred on the 23th inst. 1826; and the lowest cold, 32°, on the 21st in 1850. During the period 100 days were fine, and on 75 rain fell.

BRITISH WILD FLOWERS.

CROSS-FOOTS—RANUNCULACEÆ.

(Continued from page 285.)

DELPHINIUM. LARKSPUR.

GENERIC CHARACTER.—*Calyx* none. *Petals* five, below seed-vessel, unequal, ranged in a circle, spreading; the upper one extended behind into a long, tubular, straight, bluntish spur; the rest longish egg-shaped, with claws, various in various species. *Nectary* divided, of one or two stalkless leaves, placed in front within the row of petals, on the upper side, extended behind in the form of a tube contained in the spur of the uppermost petal. *Stamens* numerous. *Filaments* awl-shaped, widened at the base, much shorter than the corolla, directed upwards. *Antthers* roundish, small, erect. *Germens*, three, or one, or five, egg-shaped, each terminating in a style shorter than the stamens. *Stigmata* simple, bent-back. *Seed-vessels* (follicles), as many as the germens, longish egg-shaped, or somewhat cylindrical, of one valve, bursting at the inner side. *Seeds* numerous, angular, rough, at the edges of the seed-vessel.

DELPHINIUM CONSOLIDA: Field Larkspur; Dolphin Flower.



Description.—It is an annual. Root simple and slender. Stem upright, from one to two feet high, cylindrical, downy,

leafy, dividing into alternate, spreading branches. Leaves alternate, the lower on stalks about half-an-inch long, but the upper stalkless, or nearly so; they are divided down to the base into three or five lobes, each lobe deeply cut into narrow segments, and the segments are often forked at their ends. *Stipules* none. *Flowers* few, in loose clusters at the end of the branches; flower-stalks one-flowered, with a few entire, awl-shaped leaves on them. *Petals* usually blue, but varying to purple, pink, and white; irregularly scalloped on the edge; the side petals the broadest, the uppermost spear head-shaped, not blunter than the others, rather shorter than the nectary, but projecting backwards into a conical tube. *Nectary* within the upper petal. *Stamens* about seventeen, with yellow, roundish, double anthers. *Pistils*, usually two, but often only one, with very short styles, having a white, flat, fleshy summit. *Seed-pod* yellowish-brown, smooth, solitary, with short permanent style. *Seeds* nine or ten, in a double row; black, shining, angular, rough with short hairs and tubercles. *Bractes* at the base, and in the middle of each flower's stalk.

Places where found.—In sandy or chalky corn-fields. Uncommon.

Time of flowering—June and July.

History.—It is called *Delphinium*, from the Greek for a Dolphin, its flower-buds being thought like that fish in shape, as it was drawn by the ancients. The specific name, *consolida*, is from the Latin word, signifying to reunite, because formerly considered as a powerful remedy for the healing of wounds. The English name of Larkspur is derived from the long spur of the flower, which was compared to the long hind claw of the lark. It was not observed wild by Gerard, nor by Johnson, the editor of his "Herbal," in 1636, but Parkinson, in 1629, states that it was then "found in some fields of our own country." He says—"We call them in English, Larks-heels, Larks-spurs, Larks-toes or claws, and Monks-hoods." Sir J. Hill, in his Herbal, states that a decoction in water of the leaves is beneficial for the bleeding piles, stopping the bleeding, yet allaying inflammation; that a conserve of the flowers allays diarrhoea in children; and that the juice of the flowers is an excellent application to the eyes when diseased. It was the fresh juice of the leaves that was applied to wounds. The seeds are acrid and poisonous, and the whole plant we look upon as too dangerous to be ignorantly used as a medicine. It is said to be an ingredient of those French cosmetics which, when first employed, improve the complexion, but which soon are so destructive of the skin's surface. The juice of the petals mixed with a little alum is said to make a good blue ink, but we think it cannot be lasting. The best blue ink is made by dissolving Indigo in sulphuric acid, and largely diluting it with water. Sheep and goats eat the herbage of the Larkspur, but horses, cows, and swine reject it. The caterpillar of that lovely, but extremely rare moth, *Chariclea Delphinii* (Peas-blossom Moth), feeds on the wild Larkspur. This moth has been caught at Chelsea, at Windsor, and in Bolstrode Park. (Smith. Withering. Martyn. Westwood.)

Having before us a copy of Mr. Trotter's pamphlet, *On the Rearing and Management of Poultry*, which has just issued from the press, we lay aside, for this week, our notes upon older poultry literature, just to glance over

its contents, and to recommend it to the notice of our readers. It is an enlargement, and more fully illustrated republication, of Mr. Trotter's Essay, to which the Royal Agricultural Society awarded a prize in 1851; and its

author, who resides at Healey Mill, near ~~Hestham~~ ^{Heston}, carried off some half-a-score prizes at the Northumberland and Durham Society's Show, last April—prizes for Cochins, Spanish, Dorking, Pencilled Hamburgs, Geese, and Turkeys! So the author has a tolerably practical knowledge of what he writes about, which entitles him to the motto on his work—"While I live I'll crow." As a specimen, we extract what Mr. Trotter states relative to the Cochinchina variety, not only because this variety is now attracting most attention, but because it enables us to add a few facts within our own knowledge.

"Beneath the vent there is a much greater abundance of 'fluffy' feathers than in other varieties of fowls. The feathers on the thighs also partake greatly of this 'fluffy' nature. The outside of the legs, and the outside toe, ought to be profusely covered with feathers. The wings are so short as almost to deprive the birds of flight; in fact, it is with difficulty they can mount a balk two feet high: it is therefore necessary to have the balks where these fowls are kept, even lower than I have already recommended. These fowls having great length, breadth, and depth, attain to almost incredible weights: sometimes a full grown cock weighing fourteen pounds; averaging about eleven, if good specimens. The hen weighs seven, eight, nine, or even sometimes as high as ten pounds each; but, as some of them commence to lay much earlier than others, a greater difference prevails in their weights than in the weights of the cocks.

"The most esteemed colour of these fowls is ginger; but as there are pure bred birds of almost all colours, including black and white, I am in favour of selecting them as much by their shapes as by their colour. No judge of 'short-horns' would, when acting in that capacity, give preference to an animal of 'fine roan,' the shape of which was less perfect than one of a less admired colour, such as red or white; providing the character of purity was evident. Neither do I think any judge of fowls ought to give advantage to any Cochins, on account of colour, if their shapes are less perfect than others of less admired colours. The colour of the legs varies in different specimens, but a 'pinkish' is most admired. Their eggs mostly partake of a chocolate colour, but differ very much in deepness of hue; some approaching to almost pink, while others are only a few shades removed from white.

"This breed is generally cultivated as a fancy variety; but, in a work of this sort, it is necessary to take into consideration their qualities as adapted to domestic purposes, as producers of eggs, and as table birds. I am disposed to class them as layers next to the Dutch varieties. Some of the hens are extraordinary producers of eggs; frequently commencing to lay when five or six months old. Since the first print of this essay was written, I have been devoting more than ordinary attention to discover the correctness of the following statement, made by Mr. Richardson; viz., that the hens frequently lay two, and occasionally three eggs on the same day, and within a few moments of each other. I have done all that feeding might be expected to do, but I have not succeeded in procuring more than one egg in a day: I therefore unhesitatingly repeat what I then stated, that 'I know of no instance of a hen having produced more than one perfect egg in one day.' I certainly have had two eggs within twenty-four hours; but the last laid was always imperfectly shelled; which fact bears out the declaration of Dr. Gilbert, 'that it is against all laws of anatomy and physiology for a hen to lay more than one egg in a day, unless aborted;' which declaration is supported by Henry Gilbert, Esq., a gentleman eminent for his researches and discoveries in surgery, as well as a zealous cultivator of Cochins. I am in correspondence with the most successful poultry fanciers of the day; amongst whom is Mr. Sturgeon, who states that he knows of no instance of fowls in his possession laying more than one egg in a day. Mr. Punchard states the same; as does also Mr. Simpson, a fancier of acknowledged superiority; fowls of his breeding having recently had seven prizes awarded to them, and one of his

hens having received the head prize at Halifax, as the best hen in the yard, weighing upwards of nine pounds. (Mr. Simpson has been kind enough to let me have some of his produce.) Mr. Bailey informs me that he has known a hen lay early in the morning, and again late in the evening. And Mr. Andrews bids me say that his fowls do not frequently, but occasionally, lay two eggs in a day, but he attributes it to high feeding.

"Whether these latter instances may be taken as attributes of this particular breed is more than questionable, knowing as we all do 'that there are exceptions to all rules.' As an instance, I might mention a fact which came under my own observation of one egg being enclosed within another.

"The hens rival the Dorkings as sitters and nurses; and the young are hardy, and therefore easy to rear. The high prices procurable for these fowls is my excuse for not being able to give an opinion on the quality of their flesh; but an extensive breeder of these fowls informed me that he was induced to have one sent to his table, the flavour of which pleased him so much that he is in the regular habit of having them as an indulgence."

We can add our testimony as to the excellency of the Cochinchina chickens as table fowls, for as a test of the conflicting opinions upon the point, Mr. Higges, whose Cochins gained the first and second prizes at Lewes; had a cockerel three months old killed, of which bird, at the table of a friend, the writer of this partook, two old housekeepers were also present, and the opinion was unanimous, that no fowl could possibly be superior, either in flavour or in appearance. The bird had been caught unfatted in the yard the previous day, stunned by a blow at the back of the head, and then the blood taken from it, by wounding it deeply in the roof of the mouth with a penknife. The bird, though only three months old, weighed, after being killed and picked, four pounds. It is this good size at so young an age that renders them so desirable for table. They cost but little for food in that short space of time, and their tenderness is unsurpassable. They are then also of a form that no cook can deprecate. In flavour we also think them most excellent. Another valuable produce of the Cochinchina fowl are its feathers; these are so fluffy as to be nearly equal to goose down.

We have heard from an extensive breeder of Cochins, that hens of this variety have laid two eggs within twelve hours, but then they did not lay the day following.

FORSYTH MSS.

No record is more worthless than a highly laudatory epitaph of the celebrated—it is so usually false as to be always read mistrustfully, and if true, its superlative praise is unrequited. "O rare Ben Jonson" is a model that might be closely imitated, with much improvement to our sepulchral literature. So also thought Dr. RICHARD PULTENEY, and his was not vanity aping humility, for his modest temperament prevented him practising in London, and induced him to pursue the distinguished and useful tenour of his way in the less contentious locality of Blandford, in Dorsetshire. He expressly forbade any eulogy to be inscribed upon his monument; it therefore only records, in unlaboured language, his widow's affection, and by the simple, but very appropriate, ornament of a sprig of *Pultenaea*,

named in honour of him by his friend Sir Edward Smith, delicately indicates and commemorates that he was distinguished among the students of the science in which he most delighted.

He was born at Loughborough, Feb. 17, 1730, of Anabaptist parents, and, after the education of a common elementary school, apprenticed to Mr. Harris, apothecary, of that town; whence, at the determination of his apprenticeship, he was induced to commence practice at Leicester, under all the disadvantages of religious prejudice against him as a Calvinist, and with the strictest regard to economy, which prevented him from purchasing books in his favourite science of botany, which he had pursued with eagerness from a boy.

In the Philosophical Transactions are inserted his observations on the *Sleep of plants*, the rare plants of Leicestershire, history of the deadly nightshade, historical memoir on lichens, and the case of a man whose heart was found enlarged to a very uncommon size. After taking his doctor's degree at Edinburgh he came up to London, where the patronage of the Earl of Bath, to whom he was related, might be productive of the most beneficial consequences to his interests. He was graduated in 1764, with Dr. Garthshore, notwithstanding the opposition of the senior students to the practice of conferring degrees on applicants who had not resided and attended lectures. The subject of his inaugural dissertation was *Cinchona officinale*, which was inserted in the University's Thesaurus Medicus. After being introduced to the Earl of Bath by the celebrated Mrs. Montague, acknowledged as a relation from the family pedigree, and appointed physician to his person, with a handsome salary, he lost, within a year after, his patron, with whom he was just about to travel on the Continent. A medical vacancy happening at Blandford, by the removal of Dr. England to Bristol, and Dr. Cuming being far advanced in years, Dr. Pulteney quitted the metropolis, as unfavourable both to his paternal income and his constitutional timidity; and, under the recommendation of Sir George Baker and Sir William Watson, began his career at Blandford, without intermeddling in the common convivialities and gossipings of the place, or the cabals of his medical brethren, and was not long in establishing that degree of reputation which necessarily brings with it pecuniary affluence. In 1799 he married Miss Elizabeth Galton, of Blandford, a lady whose disposition and attainments comprehended every requisite to give durability of happiness to his domestic life; and, though this union never placed him in the situation of a parent, he experienced, in an amiable relation of his wife (during the latter part of his life), the affectionate attentions of a daughter. He made himself completely master of the writings of Linnaeus; his "General View" of which was out of print in four years, and which was translated into French by M. Millin de Grandmaison, with additional notes. The Royal Academy of Stockholm presented him with two medals struck in honour of Linnaeus, one by the command of the King of Sweden the other at the expense

of Count Tessin, both engraved in his Life of Linnaeus by Mr. Basire, in his best manner. His next publication was "Historical and Biographical Sketches of the Progress of Botany in England, from its origin to the Introduction of the Linnæan System," 2 vols., 8vo., 1790, intended to be prefatory to a descriptive Catalogue of English Plants, or rather to an *abbreviated Flora*, as the original MS. is intitled, which would have recorded the first discoveries of every plant. He furnished botanical materials to Dr. Aikin's England Delineated, Mr. Nichol's Leicestershire, and the new edition of Mr. Hutchins's Dorsetshire; and his arrangement was agreeable to the alterations of the Linnæan system, introduced by Thunberg and Hedwig.

Dr. Pulteney had suffered from a pulmonary complaint at the early period of his life; and a return of this was, what he always prognosticated would be, fatal to him. On October 7, 1801, he was attacked with symptoms of inflammation on the lungs, and there was reason to apprehend his liver was similarly affected. When he found the ordinary remedies, under his own direction, did not succeed, he was the first to announce to those about him the approach of his dissolution, and died October 13th. (*Gentleman's Magazine*.)

The following letter, dated August 31st, 1786, is the only one in this collection from

DR. PULTENEY TO MR. FORSYTH.

As you were so kind as to say you would endeavour to supply some of the deficiencies of my *Herbarium Anglium*, when you sent me some exotics, I have herewith enclosed a catalogue of such English plants as are either totally wanting to me, or of which my specimens are exceedingly imperfect, and I shall be obliged to you for specimens of any of them, whether they are the produce of the garden, or whether from the places of growth in the natural situation.

Any specimens of exotics that you can spare I should be glad to receive, and if there are such among them as I should happen to have already, and you think it of importance, I will return them. Be pleased to say, when you write, whether any specimens of the Hardwell Cliff fossils would be acceptable to you, as I believe in that case I could spare you a few, having a few duplicates by me.

I have enclosed some specimens of the *Gentiana filiformis* and *Pinguicula villosa*; I hope the capsules of the former are forward enough to contain seed that will vegetate. There is some sand sent with the letter, among which I believe is seed of the *Pinguicula*. These plants grow on our heaths in a sandy soil, by the side of little rills that run down into the bogs.

GOSSIP.

THE first pillar of *The Crystal Palace* was raised at Sydenham on the 5th instant, and from the arrangements made there is no reason to doubt that it will be completed and thrown open to the public by the 1st of May, 1853. The arrangements of the garden, of course, will proceed at the same time, and this autumn will not be lost as the best planting time for the out-door deciduous shrubs and trees. The purchase of the Palms from Messrs. Loddiges has been completed.

Mr. J. C. Stevens had a sale by auction of *Cochin China Fowls*, on the 2nd instant, at his rooms in King-street, Covent Garden, and another at Deptford, on the 6th. In the first sale, the fowls were generally of a superior description to those in the sale at Deptford.

Light buff-coloured specimens fetched the highest prices. Thus a pair of chickens, hatched March 6th, the pullet being "fine and light," fetched £3 7s.; "a light-coloured cock," hatched in the same month, was sold for £2; "a beautiful light-coloured imported hen, 1851," for six guineas; and another light-coloured hen, and a light-coloured cock, both hatched in 1851, sold for £3 each. Inferior specimens averaged about 10s. a head. The Deptford specimens were much too leggy to fetch very high prices. One lot, a light cockerel and pullet, was sold for £3 5s.

The Horticultural Society purpose to give prizes at their monthly meetings in Regent-street, for Kitchen-garden Produce—a step towards the useful which justifies a hope that this tardy society is at length rousing to what should be the efforts of the national horticultural association. They will offer prizes for collections of such produce in May, June, and July; for *Green Peas* in October; *Celery* in November; *Forced Vegetables* in December; *Salads* in January; *Lettuces* in February, &c.

We hear from many quarters that the *Potato disease* has seriously attacked the tubers of that vegetable. We have heard, but have not seen, that in some places in Hampshire they are masses of rotteness. In our own garden we have scarcely one affected, though it lies low. But then *the soil is light; we planted last November, and did not apply any manure*. Where the disease prevails, we suspect they were planted in April, and manure added for the crop. If so, the planters are only reaping the consequences of their own folly. We have warned them against such planting often enough.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

- ABERDEENSHIRE, Sept. 17. (Sec. G. Reid.)
 AIRDRALE, Sept. 11th. (Secs., G. Dickinson and G. J. French.)
 BATH, Sept. 16th. (Sec. H. T. St. John Maule, Esq.)
 BRIDGEWATER, Sept. 22. (Secs., Mr. J. Leaker and Mr. J. Hayward.)
 BRISTOL, Sept. 15th. (Sec. Mr. D. Nainby, Jun.)
 BURY ST. EDMUNDS, Sept. 10 (Abbey); Nov. 26 (Chrysanthemums). (Sec. G. P. Clay, Esq.)
 CALEDONIAN (Inverleith Row), Edinburgh, Sept. 2, Dec. 2.
 CHELTENHAM, Aug. 26.
 CHEPSTOW, Sept. 14. (Sec. J. F. Hartland.)
 CRAWFORD, Sept. 11.
 COLCHESTER AND EAST ESSEX, Sept. 8, at the Rev. T. Round's grounds, Holly Trees, All Saints.
 DURHAM, Sept. 8.
 FORFARSHIRE (EASTERN), Sept. 15 (Arbroath).
 GLASGOW, Sept. 10.
 HAMPSHIRE, Sept. 9 (Southampton), Nov. 18 (Winchester). (Sec. Rev. F. Wickham, Winchester.)
 HEXHAM, Sept. 15, 16.
 HULL, Sept. 16.
 KIRKCALDY (Fife-shire), Sept. 9.
 LINDSAY, Sept. 14.
 LIVERPOOL, Sept. 2 (Botanic Garden).
 LONDON FLORICULTURAL (Exeter Hall, Strand), Aug. 24, Sept. 14, 28, Oct. 12, Nov. 9, 23, Dec. 14.
 MANSFORD, In-door Show, Sept. 8. (Sec. Mr. J. G. Smith, Week-street.)

- MID CALDER (Parish school-room), Sept. 10.
 NEWBURY, Sept. 3.
 NORTH LONDON, Nov. 23, Chrysanthemum.
 NORTHAMPTON, Sept. 27, Dahlias.
 OXFORDSHIRE (BOVAL), Sept. 23. (Secs., C. Tawney and W. Undershell, Esqrs.)
 PEBBLES, Sept. 14th. (Sec., J. Stirling.)
 PONTELAND (Newcastle-upon-Tyne), Sept. 8. (Sec. Rev. J. M. St. Clare Raymond.)
 SOUTH DEVON BOTANICAL AND HORTICULTURAL, Sept. 7. (Sec. J. Cree Hancock, Esq., Stonehouse.)
 SOUTH LONDON (ROYAL), Aug. 19, Sept. 2, 8, Oct. 14, Nov. 11, Dec. 9, 16.
 SHACKLEWELL, Sept. 1.
 SURREY AMATEUR (George Canning, Grove Lane, Camberwell), Sept. 15, Dahlias.
 TROWBRIDGE (Grand Exhibition), Aug. 25.
 TURRIFF, Sept. 17.
 WHITEHAVEN, Sept. 17, Dahlias.

POULTRY SHOWS.

- BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
 BRISTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Marmont.)
 BURY AND RADCLIFFE (Lancashire), Sept. 3 (Radcliffe).
 CORNWALL (PENZANCE), about a week after the Birmingham. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and F. H. Rodd, Esq.)
 LIVERPOOL, Sept. 23.

WHAT IS THE CHEAPEST AND EASIEST MODE OF GROWING PINE-APPLES?

THIS appears a broad question to be grappled with in a single paper, but it will be obvious to our readers that we can do no more than point to the chief features of the case, and endeavour to disperse mistaken views concerning them. That the latter exist, an extract or two from queries received will plainly show that fallacious impressions concerning them must only end in expense and disappointment. That pines *can* be grown in a more inexpensive way than in former days, is very true; but why? Because they will do with a lower temperature? By no means. They equally require heated structures now as formerly, and plenty of light, involving, of course, the expense of glass.

To give an instance of erroneous impressions, one querist writes thus:—".....I should like to have a pine-apple on my table once a week all the year round. To do this, what shall I require? I suppose I can start the plants in a few pots in my greenhouse, then move them into some cold pits, and afterwards push them on in a hotbed or two. I should like to grow some as large as those I saw in the Botanical Garden, Regent's Park, a week or so since." Now, to foster such impressions as these is no part of the duties of THE COTTAGE GARDENER. Let us, then, try to show wherein the errors consist.

It will be in the memory of most who take this work, that some six or seven years since, it was stoutly affirmed that the pine-apple could be cultivated outdoors in Britain, or, at least, in the warm climate of Devon or Cornwall. All this, indeed, seemed to be backed by facts, to those who are content with the surface of an argument. Plants, it would appear, had been previously prepared under the most favourable circumstances of heat, air, moisture, &c., and the fruit being formed (we believe past blossoming), the plants were turned out on warm materials, surrounded by non-conducting matter, just when outward conditions approximated those of tropical climates. Favoured by a pretty good season, and assisted by all possible appliances, they actually, it appears, produced very good pines in a Devonshire climate. Such a strained affair, although very desirable as illustrating *what can be done with*

the pine in extreme cases, is by no means qualified to introduce a new era in their culture, or to prove that the pine enjoys a much lower temperature than has hitherto been the practice of good pine growers. Strange to say, soon after this, the very experimenter gave a plan of a new house, built by himself, for pine culture, in which the amount of piping or heating-surface appears such as is seldom witnessed in the same area. In this plan, now on our table, there are no less than four lines of piping, parallel the whole length of the house, for bottom heat alone, and four more lines parallel for atmospheric heat; and this, too, in a house only sixteen feet wide. Besides all this, there is a steam-pipe all round, which, it is presumed, may add to the heat as well as moisture. This plan may be found at page 188, vol. v., of the *Horticultural Society's Journal*. Well may amateurs, and those not "well up" in gardening, be puzzled at such conflicting opinions and practices.

That every species of business has of later years a tendency to be more economically conducted, because the careful study of elementary information leads to a juster appreciation of what is required for successful culture, we not only do not deny, but stoutly affirm. The cost of production will doubtless be lessened; but it becomes every honest horticultural fagleman to set his face against such extreme opinions, or one-sided statements, as can but involve those misled by them in unnecessary expenses and vexatious disappointments.

Thus much will serve to show our worthy querists, and others similarly situated, that they must not think of "cold pits," "greenhouses," &c., in the cultivation of the pine-apple; such may be resorted to in very necessitous cases, but must not be counted on as part of a system, or as identified with high cultural principles.

To come to the point—seeing that the same heat, air, moisture, and light are requisite now as in former days—how is the cost of production lessened? Why, principally in building materials. Bricks are cheaper, glass much cheapened, and timber, thanks to the saw mills, much lessened in cost. Here lie the economic points; for labour is not cheaper, and as for any economic advance this way, we know of none whilst pines must be grown in pots. We long since pointed to Mr. Hamilton's system as being, in our opinion, the very thing for our much-in-a-small-space man; but, forsooth, objections so multiplied, coupled with something like foregone conclusions, that whatever merits the practice might possess were speedily "lost in the fog."

We will now beg the attention of our readers for a moment to what is termed *Pannol's heating apparatus*, as a source of heat; and this, with the inexpensive simplicity of an orchard-house, would seem to be worthy of adoption in the year 1853. Having heard strong recommendation of the pines at Park Hall, near Eckington, the seat of Mr. Middleton, we immediately took the liberty of writing to Mr. Henry Barnes, the gardener. Mr. Barnes, in an exceedingly kind and sensible letter, at once most courteously answered every question, and we beg to offer an extract or two. "I am glad to say that I have been very successful with my pines. The plants are turned out in the open mould, over a tank, heated by *Pannol's apparatus*, which enables me to keep up a most congenial moist heat as high as I please, and at the same time I have a flow and return pipe all round the house for top heat; but this has already been described in *THE COTTAGE GARDENER*, and I must do the inventor the justice to say, that I never yet saw an apparatus that so fully accomplished the end required as that does. I have also a pit attached to the pinery, which is heated by the apparatus; and I have cut thirty good melons from four lights, of the highest flavour, and I have a second crop coming on, which are looking well, and this will be off in time for my cucumbers for the winter months."

Thus far Mr. Barnes. Our readers will, doubtless, join in thanking Mr. B. for his ready courtesy.

Now, it appears that Mr. Barnes is not far from the Hamiltonian system, for he plants out; he has discarded pots. In high atmospheric temperatures too, it would appear that he resembles Hamilton; but from what we can learn, he uses much stronger bottom heats; we are told 90° to 100°, whereas Mr. Hamilton seldom exceeds 84°.*

By turning to No. 197 of *THE COTTAGE GARDENER*, page 224, our readers will find some account of the apparatus by Mr. Pannol, of Leicester, himself; we have not room here for the extract. Economy, then, in the production of pine-apples must be sought principally in the simplicity with which their culture is carried out. Whatever structure is employed, however, certain conditions must be guaranteed, or success will be proportionably incomplete. Let it be made a point, that 80° bottom heat be available, if requisite, at short notice in the depth of winter, and also that the means of heating be able to furnish with facility 70° atmospheric heat; added to this, the speedy production of any amount of atmospheric moisture. We do not wish to have it inferred that such extreme heats are to be made ordinary use of in dark weather; but extremes must be provided for, if good pine culture is to be carried out. Depend upon it, starvation suits not the pine; and we have here simply suggested the securing winter conditions, knowing that this done, the rest of the year will be right as matter of course.

It will now become necessary to know, not only the efficiency, but the cost of Mr. Pannol's apparatus; for the public have a right to expect these things done in a more economic way, or the culture of pines cannot be extended. We will, therefore, seek for information in detail, as well as testimonials connected therewith, and lay them before the reader in due time, with further comments. In the mean time, we may direct the attention of our readers to what is commonly termed "dung-bed culture." Here, flues or piping may in a great measure be dispensed with; but then it is obvious that the supply of fermenting materials must be certain and continuous. But we think it far from being a good policy; for those that have but small gardens, and keep, it may be, a horse, or two cows, &c., will, at certain periods, have other objects than pine-apples to demand assistance from fermenting materials. Our advice, therefore, to all such, is rather to incur a few pounds more expense in the first outlay, than to risk disappointment in more ways than one, by depending on fermenting materials alone. Besides, although capital pines have been produced this way, yet it is but an unsafe or wasteful plan during long winters. The perpetual changing and "topping up" of linings, the anxieties to dispel stagnant moisture without too much lowering the temperature, and the exactions of the manure heap, to the detriment of the early cucumber and melon bed, constitute so unscientific, so laborious a scheme, as to make the unhappy wight who "plays the first fiddle," as our good friend Beaton says, pass many a sleepless night. We must soon return to this matter, and hope that the desultory character of these remarks will be excused.

R. ERRINGTON.

* We have received the following note from Mr. Barnes on this point. "In reading over an article in *THE COTTAGE GARDENER* of the 29th ultimo, on the *Heat for Pine-Apples*, I was rather surprised to find some remarks respecting the bottom-heat of my pines, but the parties were quite right in stating that the ground thermometer has ranged from 90° to 55°, but they were told at the same time that it was plunged to the bottom of the mould, which is five or six degrees higher than where the principal roots are, and I wish it to be understood that this heat is kept up during the winter months, when the plants are at rest. I keep a high temperature at this season, with plenty of moisture, and my plants do well, which I think is a sufficient proof that it suits them." This removes all the wrong impression about the high bottom-heat employed by Mr. Barnes; it is evident he employs a bottom-heat of from 84° to 90°.—E. D. C. G.

PLANTING FLOWER BEDS, &c.

[The following letter is such a tissue of interwoven queries and information, that we insert it entire, appending some commentaries by Mr. Beaton.]

"Mine is a geometric flower-garden, looked down upon from the drawing-room windows. The beds are on turf, and, being very numerous, I am anxious, if possible, to fill a few of them with hardy perennials that will flower for some time, and thus save the gardener's labour, and diminish the stock of tender things that too thickly inhabit the frames during the winter. Am I likely to find the common *Holly-leaved Berberry* patient under the pruning-knife, so that it might form the outer row of a couple of beds facing each other? and will it flower if regularly cut back? Within these I think of planting the old *Tiger Lilies* and *Bee Larkspurs*, filling the centre with tall late-flowering varieties of *Phlox*: can any one recommend a better assortment, and name any other things—novelty being less an object, than long duration of bloom? My *Scarlet Geraniums* are so gorgeous against a south wall, which is broken into recesses by buttresses, and which are slightly protected by reed frames in the winter, that I wish to increase such valuable ornaments. Is Rollisson's *Unique* likely to attain a height of nine or ten feet? Is the new *white variety* sent out by Messrs. Henderson, of Wellington Road, worth planting in such a situation? and is Henderson's *Defiance* geranium distinct from, and superior to, Low's *Amazon*, which appears the perfection of beauty? I have a small plant growing against the wall, bearing one bunch of flowers, which has been open a full month, and is still fine; the truss is large, and the individual flowers equally so, while their substance is such as to resist decay in a wonderful manner. The *Flower of the Day* geranium, would, I imagine, scarcely answer my purpose, and I fear that *Petunias* are too delicate to stand the winter, even protected like the geraniums. Plants that will flower the whole of the summer and autumn are, of course, the only things worth growing. The prettiest new thing I have seen is the Californian *Diplacus*, introduced by the Horticultural Society; I saw it in Messrs. Veitch's magnificent nursery, a week or two since. If it proves hardy, and continues long in bloom, it will be valuable for bedding, as the individual flowers are large, and the colour new and striking.—A DEVONIAN."

I think "Devonian" sent me a plan of his geometric flower-garden, on which I cannot lay my hands just now, but I well recollect the favourable impression it made on me at the time, and I know the shapes and sizes of most of his beds from memory. That it would be a most desirable point gained to get a sufficient number of hardy plants to keep a garden in bloom all the season, no one will deny. Many more correspondents have suggested the same plan, but unfortunately it cannot be done successfully; and before I reply to any of "Devonian's" questions, I shall here briefly state a few of the reasons why geometric gardens, indeed any garden laid out on a regular plan, is not suited for the old mixed style of planting. I may also premise that my own opinion of the fitness of what is called "herbaceous plants" for furnishing a symmetrical flower-garden is so well known, that it now seems a dry subject to refer to. They do not erect long rows of "model lodging-houses" for members of parliament, because they cannot make a tenant for a given house; the house must be made to suit the tenant.

According to the present fashion, bedding plants are lost, or next to lost, if they are not planted in masses; and if we had only one bed, would it be better to have it filled with *Scarlet Geraniums*, or with *Calceolarias*, *Verbenas*, &c., or be planted in the mixed style, with herbaceous plants, some of which would be in flower from March to October? Surely the mixed style would be the best here, as producing variety. Now, instead of one bed, a hundred beds might be so scattered over a given surface, as that none of them would appear as being part of a plan; every bed would be, like the tub, on its own bottom, without any reference to the other

ninety-nine. Here, again, the mixtures, and the clumping, or massing way of filling the beds might be adopted without any great violence to taste or prejudice; and this is by far the cheapest style of gardening. The display of flowers might also be very gay, but it could not be striking after what we have been accustomed to with "bedding plants." But this bed mode of planting herbaceous plants is not by any means the best, it is only a compromise between taste and the purse. Borders, and the outsides of clumps, for choice shrubs, are the true positions for herbaceous plants. The moment you arrange two beds, or any number of beds, on any given principle, as in a geometric figure, the style of the design is higher in degree, and, therefore, we maintain that the mode of planting should also be of a higher style to correspond. Without insisting on particular tastes, and without reference to the nature of the grounds, for a flower-garden, the true geometric is the highest style of the art of laying-out flower-gardens; that is, where the ground is suitable, and the owner is not averse to that particular style; therefore, if that be so, the very highest style of planting should be aimed at for geometric gardens. It is quite true, that fashion is an arbitrary law; but this law being the fashion of the present day, those who desire to be in the fashion, and to keep within the letter of the law, must plant geometric gardens; and all other gardens, which are laid out symmetrically, in the "bedding style."

Again, there are as many degrees of excellence in laying-out and planting a geometric figure as there are in any other designs; then the highest degree of the geometric style is that in which suitable beds or spaces are laid down for all the colours, and the due quantity of each colour, and also for the different sizes of the plants that are to be used in making out the composition or picture, and from this most and all-important rule there are no exceptions. Hence it follows that an artist, or designer, may be at the head of his particular calling, but unless he is well acquainted with all the suitable plants used for bedding at the period he works, he may not be able to put three beds together without making a blunder; and, if a faulty design is once laid down, the mixed style of herbaceous plants is the safest way of planting, because the glaring faults in the design are more easily hid that way than by the true bedding-out in masses. Of course, all this is only known in "the craft;" but it is so far unfortunate, that after having a perfect figure laid down one should be obliged to plant it so that even a designer might think the planting was as much intended for hiding faults, as for giving the charms of a flower-garden. So that it comes to this at last, if one chooses to despise the fashion of the day, in this particular, and set the law at naught, he may still be as open to public criticism as he who attempted to follow the herd and lost his way among the bushes. Still, there is this consolation, that all public writers of the present day despise public criticism on private concerns, private tastes, and private individuals, as such, and whoever wants the assistance of THE COTTAGE GARDENER to carry out privately any notions round about the garden, shall have it without reference to this or that rule or fashion. THE COTTAGE GARDENER goes farther, and says that every one has a perfect right to follow out his own views in his own way, provided always that he does not insist on others doing as he is doing.

The first question on "Devonian's" list, is—Will the common *Holly-leaved Berberry* (*Berberis aquifolium*) bear the knife to keep it low as an edging plant, and flower? I have used it that way, and found it to answer perfectly well. The time for pruning it for that purpose is early in May, just as it is going out of flower. The strongest shoots are to be cut back to the height required, after that it should be cut laterally, making a

dance carpet. Mine was kept about a foot high, and it flowered beautifully. After the third season after planting, it became necessary to cut back the underground smokers on both sides of the row, the space being confined to thirty inches. With the exception of the *Cotoneaster microphylla*, I do not know a better plant for that purpose. The *Cotoneaster* has the advantage of its coral berries all the winter, and is also more of a trimmed plant without the use of the shears, and if the Berberry is cut with the shears the leaves must be cut through, and that spoils it altogether. Both of them will grow on the poorest soil, and the *Cotoneaster* will soon make an edging from three to four rows of cuttings, put in where they are to remain, and they may be planted any time between this and Christmas.

A belt of the *Tiger Lily*, another of the *Bac Larkspur*, and the middle with autumn *Phloxes*, as "Devonian" proposes, will make a good mixture; the three coming into flower in succession. I would have a patch of the *Natal Gladiolus* (*Gladiolus pinnatus*), between every two of the *Tiger Lily*, to come in after the lilies were over, and I would have plant for plants of the *Rudbeckia chrysomela* in the *Larkspur* belt, to flower along with the *Phloxes* after the *Larkspurs* had done flowering. It is true that none of these have the same style of flowering, but in this kind of mixture that is not of so much consequence as the length of time each sort would keep in flower.

I have often desired to see such a wall of scarlet *Geraniums* as "Devonian" mentions, and whatever fence is used for training *Geraniums*, or other plants against it, ought to be divided into spaces, as his wall is with the buttresses, and each division be planted with a different variety. The *Unique Geranium* will not grow to nine or ten feet in so many years. I had one for seven years so planted, and covered with glass in the winter, and the wall was also protected with hot-water pipes, but *Unique* did not rise above five feet all the time. The variety of it called *Queen of Portugal* is more likely to suit him; it is a much stronger sort, with the growth, leaves, and flowers the same as in *Unique*. I am quite sure that I saw this variety at the Pine-Apple nursery this summer, in going round with Mr. Appleby, but there was no particular mark to it, and the lilac variety of it I mentioned the other day makes the third form of *Unique*. I also saw a large plant of the true *Unique* turned out-of-doors in the garden of the Horticultural Society last July, and every head was seeding, confirming what I have always said, that a sudden or violent check would cause many of the shy seeders to become fruitful; but whether the seeds ripened I did not hear, and that depends on how the pollen acted. The disposition to seed was evident in this very shy seeder. With its own pollen, it comes as true from seeds as if it was a wild species.

The new white variety of scarlet inquired about, I do not know. My own white seedlings are as good as any I have seen, but not good enough for selling yet. Neither do I know *Low's Amaranth*, but I have heard wonderful tales about it, and I am pleased to hear "Devonian" calling it "the perfection of beauty." I shall soon be at Mr. Low's nursery, and will report on it, and all other novelties that I may see there.

Petunias are not at all so impatient of frost as "Devonian" thinks; many of them will live over the winter, where no scarlet *Geranium* would keep a leaf, and *Geraniums* the same.

The *Shrubland Rose* is the very finest wall plant we have. I had it and a purple one, three years against a cold wall, guarded with mats, and they were more admired than any plants in the garden. At last they got too large for the space, and they were cut down to make room for a *Mandevilla*. Damp is more against them than frost. The *Shrubland Rose* is now in every

good flower-garden all over the country. It is a seedling from a delicate variety called *Higloire Rose*, by the pollen of *Deadmona*; a very strong, old *Petunia*.

There was a very small plant of the new Californian *Diplacus*, or rather *Mimulus*, at one of the exhibitions at Chiswick, but I could form no opinion upon it, and therefore said nothing about it. The straw-colour of the flowers is new; and now I shall trust to "Devonian's" account of it, and recommend it highly. There was another plant shown twice this summer—the beautiful *Indigofera decora*—which I passed, because, after giving its proper culture once or twice in these pages, no one seems to succeed with it for the exhibitions. It requires to be grown from October to May, and then it flowers all the summer. Rest it for the winter and it does no good. D. BEATON.

PECULIARITIES OF THE SEASON.

SOME time ago, attention was directed to the importance of becoming acquainted with the latitude, elevation, and the highest and lowest temperatures of the places whence we received plants and seeds. Too great attention has hitherto been paid merely to latitude and average annual temperature, and too little attention has been manifested, not only to the highest and lowest temperature of places, but also to the very important fact, whether the atmosphere was dry and unclouded in summer, as in the eastern parts of Europe, or cloudy and misty, as in many parts of Ireland, and the south and west of England. In the latter case, the growing, in the former case, the fruiting and seeding principle, would severally be at the maximum. Thus it happens, that though Dublin be 4° of latitude north of Heidelberg, there is scarcely any difference between the mean annual temperature of the two places, though the mean winter temperature of the first is some 6° higher than the latter. Nevertheless, as the summer temperature of Dublin is nearly 5° below the temperature of Heidelberg, and the atmosphere, in the latter case, is much clearer than in the former, we see, at once, the reason why fruits rich in sugar may ripen in the one case and not in the other. While, on the other hand, we have a solution of the fact, why plants that thrive uninjured in winter at Dublin and in Cornwall would require protection in Germany.

These, and kindred matters, have been frequently forced upon our attention this season. If sudden diversity, and extremes, are the advantages of our insular position, then surely we have every reason for congratulation; and never do I recollect a season in which these extremes were more apparent than in the passing summer. The most weatherwise, when pulling on his night-cap, could scarcely predicate what he should have to do in the morning. All rules and theories, as to protection and other matters of practical detail, had to be suited to ever-varying circumstances. Fortunate was he, who, by timely care, governed the circumstances, and did not quietly and easily allow them to defeat him. Without going far from our own homesteads, we shall, by-and-by, get practically acquainted with the climates of all latitudes. In April and part of May we had as clear sunshine, and nearly as dry an atmosphere, as is to be found on the plains of eastern Russia, while the nights were as frosty, and the winds as keen as could be felt, at similar seasons, on mountain chains, or great elevations in tropical regions. Everything out-of-doors required extra management—guarding everything tender from undue excitement during the day was a prime matter of consideration. Many found, to their cost, that the protectionist doctrines of Mr. Errington were no delusion. Many more will wish he had not brought such a term again, into such popular distinction. For all forcing operations, no weather could have been more

favourable. Everything rejoiced in the extra sunlight where attention was paid to root action. Plants in pots and greenhouses never were more healthy; never, in my recollection, were so little troubled with insects, and required no extra attention, except artificially moistening the atmosphere in the day-time, and a slight shading to break the force of the sun's rays.

Then came *June*, not with its usual bright and flaming sun, but with its clouds and cold rains, resembling the drizzle and the mist of the far north-west in October and November. While such weather lasted vegetation stood still. We began to despair of flower-gardens and harvestfields; to think that good crops of apricots and peaches might do for ball practice; and to fancy that showy plants in-doors would be poor compensation for the want of tender, nice vegetables at the festive tables. True, insects were tilted to their last home in crowds; *wasps*, these fruit robbers, which seemed to come the faster the more that were killed, deserted the tournament. Still, as was referred to lately, mildew came in myriads, and altogether, though not inheriting much of the gloomy, I began to look upon the future of gardening as somewhat ill-omened. But as if to read us a lesson for our doubts and scepticism, almost as quick as the *presto* of a magician, the scene is changed. The extreme of heat succeeds to what, at such a period of the year, was the extreme of cold; the earth becomes steaming hot almost immediately; vegetation progresses as I never witnessed it do before. Almost immediately the flower-beds are covered; the hard buds are expanded and opened; roses come out in a galaxy of glory; tender plants in the greenhouse are just in their element; the corn crops stand erect and flourishing; and the month of *July* will long be remembered for giving us a taste of a tropical climate with a clear unobscured sun; the thermometer in the country fully 95° in the shade, and some 40° more in the sun, while in larger towns it was considerably higher, forcing us to doff our felt hats, and frieze coats, and to patronise the straw and the gossamer. Great as the heat was, it was not found particularly oppressive so long as people were in the open air, suitably appareled, and actively employed. This is the reason why people grumble so when they go into our close plant stoves; the closeness and humidity of the air distresses them. This was also the case on the present occasion, when the temperature got considerably lower, but with a misty air loaded with vapour, waiting for cold to condense, or the electric spark to send it in copious rain drops to the earth;—the pressure upon the animal spirits then was greater than on the barometer. We were thus presented with two distinct features found in tropical regions; nor did we wait long for a third, for thunder storms and rain came, that, while they lasted, could not have been much less alarming than an Asiatic typhoon.

August has, as yet, continued unsettled; but if fine, bright weather would now set in, we would forget all little casualties, and remember a *July* with gratitude, that has turned, what otherwise must have been a late and deficient harvest, into a moderately early and prolific one.

Some of these casualties, may, however, be chronicled. I alluded lately to the *Bean* crop. There can now be no question that *Potatoes* will suffer to a considerable extent. Some early kinds taken up seemingly quite sound, and stored in dry earth, are showing signs of disease; and all I see in fields or gardens are less or more affected. *Pears* for *July* and *August* gathering have been more than ordinarily mildewed; and *Onions* have been similarly attacked in many places. The corn-fields are not our province; but I believe that mildew exists as yet to a trifling extent. The deluging rains have laid the crops considerably, but with fine weather little damage will be sustained.

Getting into our little greenhouses, we hear and listen to many complaints. Fine plants are scathed, as if burnt with lightning; and to the storms many of our friends attribute their disappointment. I cannot tell them point blank they are mistaken; but my impression is, that a little shading with canvas, or a little whitening and water brushed over the glass, when the sun was so hot and clear, would have averted the calamity. The only house plants that I noticed to have suffered with me are of *Begonia fuchsioidea*. They looked bad enough, and are just now looking a little better. I trusted to their thickish leaves; I believe a little shading would have kept them right.

Again, some of our friends pride themselves on their *Grapes* in their greenhouses; and in some cases these have suffered dreadfully; some were sent quite roasted; and the worst of it was, the footstalks of the bunch were so parboiled, that I had no hopes that the berries would ever swell. Here, again, the lightning was blamed! I believe that if air had been given early enough, and plenty of it, the ruin would not have happened. In the case of thin-skinned and tender grapes, like the Sweet-water and the Grisly Frontignacs, a little shading would have been advisable.

Turning from the house to the balcony, basket, and flower-garden, I find that little harm has been done, unless where the soil was very thin and sandy, in which situations many were burnt up. In all loamy soils, deep and rather cold-bottomed, the plants flourished amazingly, though now and then one would be burned up, and all the rest flourishing. I suffered in this respect much more from the tremendous rains, and short periods of hail, than from the heat; the plants seemed to revel in the latter. My greatest misfortune has been with some beds, vases, &c., of *Kentish Hero Calceolaria*. I formerly praised it to the echo. This season they were gems, and now they seem next to perfect wrecks, the leaves being cut to pieces, full of holes, or black spots, and altogether giving one the blues to look at them; I hope they will yet recover. Other things have been injured by the rains taking off every flower, but a little bright sun brings out plenty more.

In the shrubbery, &c., I have suffered but little; not so many of my acquaintances. Some have had the old leaves of their *Rhododendrons* burned and spotted, while the young shoots escaped, the sun fastening on those parts that presented most resistance, and were less supplied with moisture; while others, again, have had the young shoots and leaves destroyed, seemingly, from the inability of the roots to supply moisture fast enough for the excessive evaporation. I have just had a long letter about a fine *Araucaria imbricata* that has lost its leader, though bountifully supplied with water at the roots. The writer attributes it to lightning. From some places there are direful accounts from the fruit-garden; but, in the majority of cases I have heard of the calamities have happened in light soils, where the great evaporation would soon draw off the moisture in the thin soil, and in which, so far as I am aware, no attempts had been made to increase, or husband it, by watering or mulching.

With the exception of insects appearing, I have chiefly suffered by the too early ripening of some *Apricots*, and the dropping of others, both of which I blame myself for, because I think they might, at least, have been partially avoided by watering and shading. Many plants that will stand such heat when used to it, cannot endure sudden extremes. Comparing notes on such matters will be of general interest.

R. Fish.

LYCOPODIUM.

(Continued from page 293.)

A DAY or two ago, we saw, in a lady's parlour, a very ingenious and pretty use to which the *Lycopodium apodum* was applied. Long, oval-shaped, ornamental pots, or, perhaps, they might be dignified with the names of vases, about six inches deep, as much across, and fifteen inches long, were well-filled with soil, and some wide-necked glass bottles plunged nearly up to the rim in it. Then the surface was planted with the Lycopod, and completely covered with it. The vases had saucers of the same form; in these they were placed; this prevented the water, when applied to the soil, from dropping upon the carpet or floor of the room. The glass bottles were to contain cut flowers; and in the instance we saw they did so, and certainly had a novel and very pleasing effect, having much the appearance of miniature flower-beds upon a tiny, beautiful, green lawn. The vases were made of the material called terra cotta, and would last for years, if not broken by accident. This idea, we think, might be carried out to a great extent. Why not have the vases made larger, and the spaces where the bottles are filled up with plants in pots grown in a frame or greenhouse for the purpose, brought in when in flower, and renewed when the bloom is over? Plunged in this way, and the surface covered with the pretty green Lycopod, very little water would be necessary, and the roots of the plants would be then protected from the drying influence of the air in the room. The flowers would last much longer in perfection, and every bud would bloom. The vases might be made of any material combining elegance of form and durability, such, for instance, as glass, or cast iron, painted of various colours.

Lycopodiums may be used, also, to cover the borders of a conservatory or greenhouse. This has been done in many places at different gentlemen's seats, and in such a situation they are always admired, the green being so fresh and beautiful. We grow some of the drooping species in ornamental or rustic baskets with the happiest effect. In particular, we have some made of glass of circular form; these are large enough to contain a sufficient body of soil to supply them with nutriment. The kind used is the very ornamental *Lycopodium stoloniferum*. One specimen of this species measured a foot across, as much high, and drooped considerably over the edge of the glass vase, and was deservedly much admired.

The following is a list of principal known species:—

Lycopodium apodum (Footless Lycopod).—This is the most dwarf-growing of the genus, and is very suitable to grow, either in vases or in pots. It is universally admired, but requires a high degree of heat and moisture to grow it to perfection.

L. apothecium (Unsporecased L.), is also very dwarf. This is nearly hardy, but grows best in moderate heat.

L. cirratum (Circular L.).—So named from its habit of growth; the shoots grow round a kind of root-stock, push forth at first horizontally, then bend upwards in a circular manner, having then much the appearance of a bird's-nest. Very beautiful, but tender, requiring the heat of the stove all the year.

L. cordatum syn. *acutatum* (Heart-shaped-leaved L.).—Equally beautiful as the last, but of a more straggling growth, requiring to be trained with a stick in the centre, and each branch drawn towards it so as to form a neat, low bush.

L. casium (Grey L.).—Of this species we have already written. Its rich blue-green colour can only be brought fully out in the shade. The sun turns it green, frequently brown.

L. caenum arborescens, syn. *Willdenovii*, of Hooker.—A fine variety, or, perhaps, species. We have seen, a few

days ago, a fine specimen trained to the trellis on the back wall of the orchid-house of H. Wheat, Esq., at Norwood Hall, near Sheffield. It was in a shady situation, and the colour of the foliage was very rich and pleasing, much more than we ever saw it before. For this purpose it seems well adapted.

L. denticulatum (Toothed L.).—A well-known useful species, suitable for covering the borders in a greenhouse, or to grow in pots in shady places. This species has lived through a mild winter in the open air, in several places, on shady rock-work. A very useful, easily-propagated species.

L. dichotomum (Two-branched L.).—Very pretty, but rather scarce.

L. flabulare (Slender L.).—A drooping species, with slender branches, of a pale green colour.

L. Galeottii (Galeott's L.).—A handsome, upright-growing species, worthy of being in every collection, though but little known, and very scarce.

L. lepidophyllum (Scale-leaved L.).—This is the most tiny of the genus, a wine-glass will cover the largest plant. It is curiously pretty, and is the most rare of all the tribe. A gem indeed, but requires stove heat constantly.

L. Schottii (Schott's).—A very quick-growing plant, of the most drooping habit, and consequently most suitable to trail over rock-work.

L. stoloniferum (Runner-bearing L.).—This forms a handsome pot-plant, branching, rather drooping, but if the central stem is tied to a stick, the branches droop all round, and it then forms a little weeping tree.

T. APPLEBY.

(To be continued.)

THE HOLLYHOCK.

THIS old-fashioned ornament of our gardens for several years has been almost jostled out of the ranks of fashionable flowers by its more manageable competitor, the Dahlia. Twenty or thirty years ago, the Hollyhock was all but banished as a flower not worthy to be cared for, much less improved, or, indeed, grown at all, especially by the scientific, or, perhaps we might say, fantastic florist. The cause was not a capricious or false taste, was, perhaps, the extreme capability of the Dahlia for improvement. As soon as this was discovered, every florist, great and small, rushed to the diggings. The word is now so familiar that it will be understood if applied to any pursuit by which gold may be obtained. Well, raising new Dahlias was quite the fever, and this excitement raged through the length and breadth of the land. Acres upon acres of seedlings were planted, and seed saved in abundance, with judicious care, for which English florists are so remarkable. Girling, at Stowmarket, Widnall, at Cambridge, and Levick, at Sheffield, were, perhaps, the most successful in their day in the Dahlia diggings, and they had their reward. Through these earnest and zealous efforts the Dahlia became the flower of the day. It was not uncommon to give £30 or £50 for the stock of the then-thought-the-best Dahlia in the world. Now this Dahlia fever almost banished the aspiring Hollyhock from the gardens of the florists; but time, the great modifier, softened the rage both in favour of the Dahlia, and disfavour of the Hollyhock;—the latter began to creep up again; being first thought worthy to occupy a place amongst the shrubs, or behind the favoured rival. Some less ardent lovers of the Dahlia began to collect the best double Hollyhocks, observed points of floral excellence in them, and where wanting, began to endeavour to produce them. Success somewhat unexpectedly rewarded these efforts. Chater, of Saffron Walden, Bircham, and some florists near Edinburgh, soon proved that the

Hollyhook was as capable of improvement and bringing within the ranks of florists' flowers as the Dahlia. Ingenuity soon found out a method of increasing and preserving the kinds that had been so improved, and at this day we might almost venture to say the Hollyhook looks down with lofty dignity upon its now humbled rival. Comparing the merits of these two rival flowers, both flowering in autumn, and both possessing properties such as the florist can recognise, we should be inclined to give the palm to the Dahlia, chiefly on account of the length of time it ornaments the flower-garden, and also in the now exquisite beauty of colour and form to which it has been raised. Whether the Hollyhook will ever attain to such decided perfection of colour and form is yet to be proved, but the fact of its bloom soon being past will be, we fear, a bar to its becoming that general favourite that the Dahlia has been, and still is in a less degree.

Certainly the improvement in the Hollyhook has been wonderful. Very lately we visited a garden in Hertfordshire, where they were cultivated to a great extent; several of the best known sorts were in flower, such, for instance, as *Walden Gem*, *Comet*, *M. O. Baron*, &c., and we were much gratified with the sight. On the premises was a long row of seedlings, most of which promised great things, having uncommonly large full buds. Several were open, and showed great merit; but one more especially, and when we say that it was like *M. O. Baron* in colour, but far exceeded it in size, fullness in the centre, with superior guard petals, our hollyhook amateur readers will understand what our feelings were when looking at and admiring this truly fine seedling. This fine collection is growing in a garden at the back of the Crown Inn, near the station at Broxbourne, on the Eastern Counties line of railway, and any one desirous of a day of quiet fishing will find this an excellent spot to visit; and there, in addition to the, to us, doubtful pleasures of angling, he may see a truly superb collection of Hollyhooks, and the landlord will show them with all the zest and politeness of a true lover of flowers. So much were we pleased with what we saw there, that we determined forthwith to take pen in hand, and commence a few essays on this flower, for many years neglected, and even now not known to the extent which it deserves. We mean, that in many parts of England, Ireland, and Scotland, there are hundreds of growers of flowers that have no conception of the improvement that has been accomplished in the Hollyhook. They may have heard a rumour of such a thing, and they may have seen advertisements of the kinds in the catalogues of the growers, but they must grow them before they can understand and appreciate their beauties. For the benefit of such into whose hands *THE COTTAGE GARDENER* may come, we shall direct our attention to the following points:—1st. Soil and situation. 2nd. Selection of kinds. 3rd. Planting and after management. 4th. Propagation by cuttings and seed; but our prescribed space is now full, and therefore we must say—*To be continued.* T. APPLEBY.

MILDEW ON PEAS.

NEXT in importance to hastening the growth of any production, is that of retarding it beyond the usual period at which it is generally found in perfection. Hence the "having a vegetable product all the year round," implies, in most cases, that that vegetable has been forced, produced naturally, and retarded. That one and the same crop of any plant cannot do all this, must be obvious to every one; but the judicious treatment by which it is more or less accomplished forms the skilful part of the management. Of late years much has been done in this way with fruit. *Grapes* are said to be attainable in good table condition from the first of

January to the last of December; and *Pine Apples* the same; while most of the small fruits, more common in our gardens, seem hitherto to baffle the skill that has been directed towards maturing them in the dark days; and though currants at Christmas are not unusual, their presence at that time is more due to their property of resisting decay, than to any extraordinary treatment they may have received during their growth; but as our duty is more especially with kitchen-garden vegetables, we have only digressed as above by way of analogy, as much the same laws govern the one class as the other, and difficulties, and now and then failure, attend both.

That atmospheric causes have much influence in the retarding process, must be apparent to every one; and, unlike the forcing department, we have no means of counteracting the effects resulting solely by those changes of the air, which, however beneficial for one part of a plant's existence, are diametrically opposed to its welfare at another. For instance, September is usually as warm a month as May; the thermometer will range as high, and frosts are, perhaps, less common in the former month; yet mark the result: *Peas*, which in May flourished with a vigour which made their daily progress visible to all who took the pains to look, will now be found to languish, and probably perish, in spite of all the artificial assistance that can be given them. This example, of course, relates to the half-advanced crops in the two months respectively mentioned. Now, that something may be done to mitigate this evil, it is our purpose to show; at the same time that it will always do so, is advancing too much, because so many other causes may be in operation at the same time; and if those of an injurious kind predominate, farewell then to success. However, let us not give up the contest in despair, and, taking a late crop of peas as our text, it requires no extraordinary research to find out that *mildew* is one of the principal agents of this plant's destruction. This insidious enemy, which assuredly, of late years, has been on the increase, is much more difficult to extirpate than any disease engendered by insects of any kind; and when it once seizes on this plant before the pods are formed and filling, then adieu to all prospects of a satisfactory crop. By some peculiar feature in its organisation this pernicious parasite spreads with frightful rapidity; and from the healthy green which the foliage ought to assume, it soon wears a grey hue, and eventually one of mealy whiteness; at which stage every brood scatters its progeny far and near, to establish itself on any object calculated to give it support.

This tiny fungus, which in one or other of its forms exists on several plants differing widely from each other, and acting as such a scourge to all, is yet said to be exceedingly sensitive to certain influences, which, when brought to bear against it, are said to exterminate it. Not the least of these remedies, or partial remedies (for no one has yet ventured to assert that it can always be eradicated), is that ever-useful agent, sulphur, which, though it will not in all cases succeed, does in many check the evil. But it is hopeless to think of the leaf of an annual plant like a pea being restored again after the severe measures adopted to drive away a deep-seated disease, but when the attack is but partial, and the foliage in the other portion healthy, active measures, aided by other external favourable influences, will do much to keep it under, so as to insure a crop, not so good, certainly, as when grown at a more congenial season, but as good as can be expected for the unusual period.

Considering the devastations that mildew makes on many crops, even on those favoured by all the advantages which art can bestow, it is not surprising that much should have been said about its origin, effects, and cure, and, like its *gout* in destruction, the

"potato disease," such conjectures and remedies are so various as to make it matter of doubt whether another one could be invented or not; but it is only fair to observe, that amongst the many antidotes to its extermination, sulphur stands pre-eminent for its qualities in that respect. Latterly other substances have been added, as lime and soot, and some have found the compound of lime and sulphur, when mixed in equal quantities, boiled together, and the clear liquid obtained, diluted with water, syringed over the plants, the best mode of applying it. This has been done to some extent in some hop plantations that have come under our notice, and from the sanguine hopes of the parties who adopted it much may be expected. Now, though we have not yet had sufficient experience in this liquid preparation to assert its superiority over sulphur used in a powdered state, yet we are of opinion, that for all out-door crops it will be found more beneficial. The reason is obvious; the dry sulphur is in itself harmless, either to red spider, or to mildew, as it cannot be swallowed as food by the one, nor assimilated by the other, but the vapour it gives off when heated may be distasteful to both. Now this vapour has a much better chance to have effect in a house than in the open air, where they so speedily disperse with the atmosphere, and are consequently weakened to an extent to be no longer hurtful, or, at least, much less so than when shut up in a structure like a hothouse. We say, therefore, to our friends whose peas are suffering from mildew, try the application of sulphur boiled with lime, and report the result to the readers of THE COTTAGE GARDENER. The ingredients are obtained at a cheap rate, and the mode of using them equally simple, and if the result confirms our expectations, that this post may be overcome by such means, one great step towards retarding, or even forwarding some crops, is attained; as who has not noticed *Cucumbers*, *Vegetable Marrow*, and even *Turnips* become a prey to this insidious enemy, which otherwise might have continued in bearing much longer? and when it is known the many thousands of pounds loss it is to the hop growers, we do not call attention to its importance without a just knowledge of the utility any practical remedy must be in a national point of view; at the same time we will take notice of what is being done, and report accordingly. J. ROUSON.

ALL THINGS ARE POSSIBLE.

By the Author of "*My Flowers*," "*The Cottage Lamp*," &c.

THE age of miracles has not yet passed away. The cottage gardener, whose death was hourly expected when I wrote my last paper, is a living proof and witness that "the hand of the Lord is not shortened that he cannot save," when man's most skilful efforts come to nothing. He yet lives to show that the dead are now as mightily and sensibly raised to life as when Jesus Christ called Lazarus to "come forth."

John F.—yes lives; and never was there a more striking, astonishing proof of the mercy and goodness of God. His medical attendants saw and felt that no earthly power could save him. They did not think it improbable, but impossible, from the nature of his complaint, that he could live; and when it was said to them, "Do trust that God may yet bless the means you have used, and raise him up again," it was most gravely and solemnly replied, "A miracle may restore him, but nothing else can."

That miracle was wrought. Without any apparent reason, without any cause that man's eye could discover, a change suddenly took place; the pains of death ceased, and life once more lighted up the languid frame. The medical man was dumb; it was no work of his he saw and felt; it was all, from first to last, the work of God. From that moment a gradual recovery has taken place; weakness is of course great; but John can now sit in his little kitchen once more; he can creep gently up his pretty garden to look at his

crops and his bees; and he can speak again of his favourite woodcraft, which for a long time he could not do. He will now, I trust and hope, speak of other things,—things that belong unto his peace; things that grow clearer and greater when the things of earth fade and die; things that a death-bed shows and teaches, that either make the pillow smooth and soft, or fill it with thorns and anguish. He felt that all was not right when he was at the gates of death; and now that he has been "delivered from going down into the pit," surely he will seek to know the "ransom" that has been "found" for sinners! The very acts of husbandry he has so often practiced; the very circumstances of woodcraft, have been shown forth in his case. Will not their voices be heard? How often has he "dug about and dunged" the unfruitful tree! How often have I seen his axe laid to the very root of a tree, and heard my sister exclaim—"Stop, John; do not cut down that tree; we do not wish that tree touched;" and the unconscious oak or larch has gone waving on in the buoyant breeze; little recking of the stroke that would, in one moment more, have laid it low! Surely now these things will come home to his heart with power, and lead him to "hear and understand." At seventy, we cannot hope or look for many days; the grasshopper is beginning to be a burden; and when so violent a shake has taken place, so loud a call has been cried in our ears, we cannot say how soon the last summons may come. Yet "the heart is deceitful above all things, and desperately wicked; who can know it?" When danger is passed, the fear subsides; without conversion of heart, no real change takes place; no real alarm awakens; no real peace ensues. Terror is not repentance; vows are not living faith; how soon does such apparent goodness dry up like the morning dew!

I remember, some years ago, a man being suddenly struck with what was thought a fatal blow. Whether it was an accident, or an illness, I cannot now bring to mind, but it was a sudden seizure of some violent kind. He was a drinking, swearing, desperate character, and his terrors I shall never forget. With my own senses I saw and heard him, as he lay helpless on his bed. His own words were—"I see hell open before me! I see the flames; I am lost for ever, if I die now!" It was a scene for the ungodly and sinners; a terrible scene; could it ever be forgotten? Yes. That very man is living now, as careless and dead as ever! After terrors that had sprung up in his own heart; after protestations of repentance, and agonizing cries for mercy, he rose up, and "returned to his vomit."

John F.—lives in a bowery cottage, in a quiet, beautiful dell. He looks out upon green hills, which remind us all of those "from whence cometh our help." He is surrounded by gardens and fruit-trees, and woods and plantations, all crying aloud with their soft voices, and warning us to "bring forth fruits meet for repentance;" to beware of being "trees whose fruit withereth;" to seek wisdom, "which is a tree of life to them which lay hold on her;" and to remember Him who is "as an apple-tree among the trees of the wood," whose "shadow" is a "delight," and whose "fruit is sweet" to the "taste." He has already seen death, for his wife was taken from him some years ago, and he has sat in loneliness ever since; but without spiritual sight, what are all these things? Until now, his eyes were blinded; but this last visitation has, I think, quickened his sight in a measure. He may be said to "see men as trees walking;" and this is an earnest that clearer vision may yet be graciously vouchsafed to him, if he goes in simple and steadfast faith to Him who only can give sight to the blind. John will, probably, never again be able to wield an axe, but he may use a still more powerful weapon—"the word of the Spirit;" he will, perhaps, never even be able to dig, and plant, and sow, as he has done hitherto; but he has a garden hidden from every eye but that of God, which needs digging and planting a thousand times more than any soil that man can till; and there he may labour without ceasing until "the night cometh when no man can work." There will be no lack of business there; and it will be a work which will follow him when the grave closes over him.

Let us all deeply reflect upon the miracle wrought upon John F.—. Let us take warning, and let us take comfort too. Nothing is too hard for the Lord; "all things are

possible with God." Let us, in all our sicknesses, use the means God permits for our recovery; yet let us in heart seek to the Lord, and not to the physicians, for through Him only their hands can heal.

Let us be ready. When death comes, and we feel, like John, that "things are not right," we shall have but short and miserable time to set them in order. We may not be miraculously healed: a thousand to one against it. Let us not leave to a dying-bed that which needs our fullest health and strength to do. It is no small thing to turn to God; it is no light thing to perish.

POULTRY OF THE CALAISIS AND THE ARDRESIS.

(Continued from page 311.)

"THE Society of Practical Agriculture of the Arrondissement of Le Havre, has lately been occupied about the destruction versus the preservation of crows (*des corneilles*),—a much controverted question amongst competent agriculturists. For if the crow really is a powerful assistant to the countryman in the destruction of white worms, larvae, and noxious insects, it makes him on the other hand pay very dear for its services, by making considerable havoc amongst his young crops, and by devouring the fruits of the earth, which it digs up by means of its very strong bill. In those localities where there are no permanent lofty woods, crows are only birds of passage, and their sojourn is not long enough to occasion serious losses. In such a case it is better to preserve them, because they then do more good than harm. But in other neighbourhoods, where tall trees are numerous, and where these birds build, they are then found in such numbers, that serious injuries to agriculture are the result. (This reads more like rookeries than croweries.) The different opinions given on this subject have shown such a difference in the respective appreciation of the usefulness or the injuriousness of crows, that no general measure for the destruction of these creatures, otherwise than by the gun, could be proposed. Under these circumstances, the Society decided that it had the right to request of *M. le Préfet*, local authorisations for obtaining the privilege of destroying crows otherwise than by the gun, in those localities only where they are too numerous." Rather an undecided decision to come to. Is it possible that the Society is not accurately acquainted with the difference between a rook and a crow? It may be so; in which case they are, as too often happens, only legislating blindfold.

But a course of poultry was promised, and not a rook-pie,—however good in its way the latter may be for courageous epicures.

A notable fact to be observed throughout the Calaisis (and what is said of it in this respect, is applicable far beyond its limits) is the abundance of tame pigeons; for wood pigeons and turtles are to be seen in the forests. Every village, every farm, every square, street, and lane, has its pigeons running and flying to and fro, picking up every waste crumb and seed. In the towns, the attics of the houses are their usual habitations; in the country, either capacious dove-houses (*colombiers* in the form of square towers), or portions of the roomy farm-buildings. As to kinds, they are mostly utter mongrels; crosses of the Antwerp Carrier, of the Turbit, and the Runt, are often visible. Runts and Dove-house pigeons tolerably pure are not uncommon. Blue Rocks, scarts, or not at all; the mode of life here is much too domestic for them. All are very fine birds; the average of weight must be considerably above what it is in England; and when they do begin to breed, they are abundant indeed. During the pigeon season (which is here considered to be contemporaneous with that of green peas, though lasting beyond it in the autumn), a couple of excellent young pigeons can be had for twelve sous, at the regular market price, which is a fraction less than sixpence, seeing that the shilling English is worth twenty-five sous. Pigeon-pie, therefore, is not an extravagant luxury. But the price of all poultry produce is raised along the whole of the north coast of France, at least as far as Le Havre or Cherbourg, by the enormous exportation to England. In the interior; and to the south of

Paris, it is much cheaper. The pigeons here cost their keepers but little; they forage far and near, and no doubt at times commit heavy depredations on the crops, while at other seasons they render good service by consuming the seeds of weeds. Although pigeons pair for life, and are tolerably faithful to each other, I think their breeding in and in is greatly checked, and their mongrelization here continued by oft-occurring accidents. The forests rear a number of the larger hawks; the need to feed their young would put them in pursuit of pigeons, which are impelled by the same instinct to scour the distant fields. In spring, many a columbine widow and widower would be made by this cause; and in autumn, in a country where every man has a right to shoot on his own land, and protect his harvest, many a pigeon may be supposed to leave its dove-house never to get back again. The survivors are not inconsolable, and soon find a new partner, and a frequent mixture of blood is the result.

As to cocks and hens, they are equally innumerable, and equally miscellaneous. I have not seen the slightest symptom of an approach to a pigeon or a fowl fancy; perhaps the translation of some of our treatises into French might awaken the taste; at present the only competition seems to be who shall have most, who shall be, what we should call the most completely over-stocked. I can now realise the scene in a country inn, which Pigault Lebrun, a native of Calais, inserted in his earliest novel.

"The rest answered exactly to what I had just seen. Smashed window-panes, broken-legged chairs, worm-eaten tables, consumptive chickens (which ran everywhere, and left on all the furniture marks of their passage), a landlady only fit to touch with the tongs, and a landlord in special bad temper. Such was the place of amusement where we had to pass the night.

"I asked what they could give us to eat. The answer was, an excellent *fricassée* of chickens. 'Made with these?' said I, pointing to those that were trotting around us. 'Yes, Monsieur, yes,' said the governor, nipping his eye-brows, 'and you will be sure that they have not died of the pip.' I promised him very politely to pay for his chickens, and prevailed upon him to keep them. I returned to the *berline*, handed out the two ladies who were my travelling companions, and introduced them. They looked at me, and made a grimace! The wisest plan was to amuse ourselves with all this; and that was the course we took. We seated ourselves around the fire. Juliette warmed herself, Mademoiselle d'Héronville played her guitar, I dried my cloak, and the coachman brought us up from the carriage certain means of consolation which rarely fail in their effect.

"Scarcely had we begun our supper, when seven or eight chickens jumped into the dishes, pecked the bread, the pie, and even the cold meat. I believe they had not eaten any thing for two days. I hunted them out, and shut the door; they returned by the cat's-hole (*la chatière*). One perched on the back of my chair, another on Juliette's shoulder; a third hooked its claws in Mademoiselle d'Héronville's hair. We got up from our seats; we ran about the chamber holding the plates in our hand, and the chickens followed us wherever we went. The coachman took an old pot, half filled it with bread and pie-crust, set it before them in one corner, they fell upon it, and left us quiet.

"In the night I was awake by a trembling voice calling me into the room. 'What is the matter?' said I, rubbing my eyes. 'There are ghosts here.' 'And pray where are the ghosts?' 'Come here, and look then.' It was Mademoiselle d'Héronville who pointed to something at the further part of the chamber. I looked. 'Eh! it is a pot,' said I. 'Yes, but that pot walks.' 'How walks?' 'Eh! it certainly does walk,' and she crept close to Juliette, who slept soundly. I looked more attentively, and actually the pot was moving. 'What do you think of that?' said she. 'It is very extraordinary.' 'Ah, mon dieu, how frightened I am!' 'At what?' 'After all it is only a pot.' 'A pot! have you ever seen a pot walk?' 'I confess that does not commonly happen.' While we were talking, the pot visibly approached. The night-light was at the foot of the bed, and would soon be upset. I lost all patience. 'Were it the devil,' said I, 'I will know what it is.' I gave the pot a good kick. A chicken that was under it flew up to the bed, and awoke Juliette. I began to laugh. Mademoiselle

d'Héronville followed my example, and Juliette also, when she knew what had happened.

"We puzzled our brains to guess how the chicken could get under the pot. Juliette penetrated the mystery. This pot was the same one with which the coachman had fed the fowls. The chickens, jumping upon the edge of the pot, had upset it, and one of them was caught in the trap. It had seen the light through the cracks and broken places, and had tried to get rid of its covering."—*L'Enfant du Carnaval*. • Vol. ii. chap. 7.

Cocks and hens penetrate, now as then, here, there, and everywhere. No hen is old enough or ugly enough to be destroyed. Many a hen "with a happy leg," survives some accident which has lamed her for life; but she seems to be only the more highly respected on that account. Perhaps that deference to the Scotch notion may be one cause for the overflowing superabundance of eggs. At the time and place where these words were written (May 17, 1852), eggs were, then and there, sold at the rate of 17 sous for 20. They had been even cheaper, namely 16 sous for 26! And all this while supplying the voracious demand of the English market, to which, however, all the towns along the coast, Dunkerque, Gravelines, Montreuil, Dieppe, &c., help to contribute. It is astonishing how I can get my omelette at such a reasonable rate.

Throughout France, eggs are sold by the hundred of 104 (or with very liberal dealers 105); the quarter of a hundred, or *quarteron*, is always 26, and the *demi-quarteron* 13, so that during the weeks that eggs were, in this market, 16 sous the *quarteron*, they were cheaper than three a penny. I could eat two eggs every morning for breakfast, and could get change out of a penny for that item of the meal!

(To be continued.)

POULTRY VARIETIES--MALAYS.

I HAVE been much interested in reading the various descriptions, &c., of the different classes of poultry which have, from time to time, appeared in THE COTTAGE GARDENER, and shall be glad to find a continuance of articles written by able writers, who have made any particular class of poultry their fancy. It will then follow, that those who have inclination, as amateurs, to commence keeping poultry, will have some sound standard to follow in selecting stock birds for that purpose. It has seldom been my experience to meet with an amateur who was thoroughly conversant with the different points of merit in many varieties of fowls. I have found many who may, for years, have paid attention to one particular breed, and whose judgment on that particular class was undoubtedly sound, who appeared to know but little of the merits of other descriptions. If any such would, from time to time, enlighten and gratify the public with their opinions and experience on such birds as they have paid such attention to, it might prove of much value. There can be little doubt but that the breeds of poultry in this country have been much improved during the last few years, and much of this improvement must be attributed to the poultry shows which have been instituted, and carried out with so much spirit, and which have induced parties in easy circumstances to spend both time and money in rivalry with their neighbours. That this spirit is increasing, is evident from the prize sheets which are now before the public.

I observe, with pleasure, that in the Birmingham prize list for 1852, a distinct class is allotted to the different colours of Cochin-Chinas. This, I think, is likely to work well, as many first-rate birds are produced in both light and dark colours; and it has appeared to me, that if no encouragement was to be given to the breeders of good birds, unless they happened to be the fancy colour, that the stimulus to the fancy would receive a severe check. For though light buff is at present the prevailing fancy, this fancy may suddenly change, and parties who have paid great prices for stock birds of the fancy colour may be completely chagrined at finding another season that the furor is for dark or white.

The article headed "*Malay Fowls*," in No. 125, appears to me to be written by some one well versed in the points and weights of good birds of this description, and contains also

good suggestions as to the improvement of other breeds from it before it becomes quite extinct. For some years I have paid considerable attention to this breed of fowls, and know that it is difficult, even now, to procure really good birds of this class (which, by-the-by, I esteem fully as good as their more favoured neighbours, the Cochins); and I should have been glad to have seen something more of a spirit to recover and improve the breed, rather than let it die out for want of encouragement.

It has been considered, at the two last shows at Birmingham, that the birds in this class were deficient in merit; and I would suggest, would not attention to their improvement have been more likely to have been drawn by the offer of premiums at least equal to the Spanish and Cochins? That they have points of real merit, I think no one will dispute who has had opportunity of cutting them up, and knowing at the same time the ages of the fowls so disposed of. Last year I raised a number of them, and at six to eight months old, killed most of the young cocks for the table, and found them, weighing from seven to nine pounds each. This is no mean weight, and the quality was quite on a par with any ordinary fowl. They are birds that are easily kept within circumscribed limits—nine rarely attempt to fly over a wall three feet high. They attain a great weight in a short time, lay a rich egg, have strong constitutions. They are noble-looking birds, and will repay those whose fancy leads them to give them a trial. Let us not quietly see good stock like this sink into oblivion, but let such of your readers who have any doubt of their merits give them one trial, and judge for themselves.—ONE IN THE RING.

TO CORRESPONDENTS.

* We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of the Cottage Gardener, 2, Amen Corner, Paternoster Row, London."

X. Y. Z.—We have two letters lying at our office directed for "X. Y. Z.," if the party for whom they are intended will send us a ready-directed and stamped envelope, we will enclose them in it, and post them.

SECRETARY OF THE LIVERPOOL POULTRY SHOW.—In answer to many queries for the name of this gentleman, we reply, it is Mr. H. White, Warrington; but we confess we think that the society of which he is the very efficient official, and, indeed, all similar societies, would do no more than justice to us, as well as to themselves, by advertising their meetings, with the particulars desired by intending exhibitors.

ALPINE STRAWBERRY (J. B. H.).—If you mean the white variety, we can testify that it is not lost, for we have it in our own garden. Can any reader tell where "the true Chinese breed of pigs is to be purchased?"

TAKING HONEY.—"Rusticus" seeks "information as to the best means of taking honey, without destroying the bees, from a swarm of this year," treated originally according to the plan advocated by a "Country Curate," in which instance "the comb is well filled, and the hive has thriven well; the swarm having been much enlarged by following the plan of removing the old stock, and putting the swarm in its place." And your correspondent further asks: "Will common driving answer, or if not, what is the best plan?" "Fumigating with puff ball, or any other narcotic, I do not, under any circumstances, recommend, where *clean honeycombs* is a desideratum. Indeed, I am as averse as ever to fumigation at all where it can be avoided. Though I often have occasion to adopt it, and find it useful in experiments, it has generally proved to me a filthy, unsatisfactory process in itself. If bees are to be saved, therefore, I still continue to patronise *driving*, though I cannot ensure its universal success. Yet I have never found it fail ultimately where the hive is strong in bees and full of comb. In very heavy hives, however, a new difficulty presents itself; the comb may become disengaged, and a smash ensue. Nothing but extreme care will prevent this. It would not answer as "Rusticus" suggests, to remove the swarm away, and put the old stock in its place, which is close by, because only the *older* and useless bees would leave the swarm, besides which, I imagine there would be much fighting. If the bees must be saved, either fumigation or driving must be had recourse to. But I have lately come to the conclusion, I think, that the brimstone-pit is, after all, the most profitable, as certainly it is the least troublesome method, and as little cruel a way as any of managing spoliation-stocks in autumn. It is the most "profitable," because I believe that but a very small proportion of the *full-grown* bees which are added to a stock in August survive till February, while they will certainly consume much honey. I am now, therefore, only careful to save the *celled brood-comb*, of which large quantities, "*apes gregis*" (the hope of the swarm), are found in all good stocks in early autumn. It is the issue of this brood upon which depends the prosperity of every stock another year. For the best way of doing this, see the "*English Bee-keeper*" (Rivington's), pages 61 and 102. If, however, a stock intended for preservation is weak in bees in autumn, then the addition of any full-grown bees is of course advantageous, as tending to induce the queen to lay at once with renewed vigour. Let your correspondent, if he still is bent on saving all his bees, try what driving

the bees of the swarm up into the old stock will do; then he may put the old stock, which he says is "very heavy," about half-way between the two stands. We should be glad to know the result. *Query?* Has any body seen any bees at work upon the honey dew this year?—A COUNTRY CURATE.

ONION PINE-CULTURE (Essex Farmer).—You will see an article by Mr. Errington which helps to meet your case. Pines are grown from suckers, crowns, &c., and only from seed by the curious. Gardeners' wages—good ones—vary from £50 to £100 per annum. You would do well to buy "Hamilton on the Pine-apple;" his system possesses a greater degree of simplicity than any other. You will find further accounts of pine-culture before long.

GAPES IN POULTRY.—M. R. writes as follows:—"As the rearing of poultry is now so much thought of, it is of some consequence that the cause of the increasing complaint among young chickens, commonly called 'the gapes,' of which so many broods die, should be ascertained. I have taken great delight in rearing poultry; but for the last ten years I have lost the greatest part of my broods from this complaint. On examining the dead chicken I find the wind-pipe filled with worms. The only remedy I have discovered is tobacco-smoke; but this is very troublesome, for it requires to be used sometimes twice in the year and to be used nearly every day for two or three weeks. I am now convinced that these worms are in the water; for a few days ago, one of my chickens fell into a well, and on being taken out (dead, of course,) I observed several of the same sort of worm adhering to the feathers. I would, therefore, suggest to some of your readers who are fond of their poultry, and where this disease is prevalent, whether boiling the water that is given to the very young chicken would be a preventive. I would try the experiment myself, but am now a great invalid, and I could not depend on servants taking the trouble." Mr. Yarell being applied to on the subject, replies:—"The intestinal worms called *Filaria*, from their thread-like form, I have never seen in the wind-pipe of any bird. The worms which occasionally infest the trachea, and are so destructive in chickens and young pheasants, producing the disease called the 'gapes,' are flattened, fluke or flounder-like, and are called *Fasciola*. But what, in the present instance, may be more to the purpose, is to state that the best mode of curing the gapes in chicks and young pheasants, is to be found in the Supplement to 'Montagu's Ornithological Dictionary,' under the article '*Pheasant*,' part of which I have used in the 'British Birds,' under the same head. The *Fasciola*, lodging in the trachea, adheres by a kind of sucker to its internal membrane, and causes death by suffocation from the inflamed state of the part. The receipt alluded to by Mr. Yarell is fumigation by tobacco, found to be an infallible specific when administered with due care. The young birds are put into a wooden box, into which the fumes of tobacco are blown by means of a common tobacco-pipe. Any state short of suffocation by the remedy, is found to be a cure for the complaint."—J. O. W.—We do not think, as suggested by M. R., that the worms in the windpipe of the fowl are taken into its beak with the water, any more than that the *Ascarides*, so irritating to children, are swallowed with the uncooked fruit they eat. Bad water and raw fruit cause an unhealthy state of the body; and wherever there is want of health or vigour in the animal frame there parasitical vermin are most likely to occur. Mr. Yarell states that the worm causing the gapes is *Fasciola*; another authority states that it is *Syngamus trachealis*, or *Distoma lineare*; and we are much mistaken if we have not observed in the windpipe of the fowl so diseased the *Strongylus papillosus*. May there not be different species, any one of which would cause the irritation in the windpipe which causes the symptoms? At all events, we are sure that tobacco-smoke is the only known effectual remedy, and that hard feeding is the best preventive.

POULTRY AND POULTRY SHOWING.—*Semper Vigilans* says, "The question daily becomes more difficult now to say correctly which are true Cochins Chinas, or Spanish, or Dorking; whether combs are single or double, and such like. Now, to put the whole question upon its proper footing requires the establishment of rules for all descriptions of fowl or animals shown, and that these be printed and sold to any one upon application, declaring such to be the judges' criterion they are bound to follow. In order more correctly to come to some general opinion upon these points, let every one give their views of what constitutes perfection in every class of fowl they chance to know, marking out the most leading points in in rank; for instance, 1, *size*; 2, *form*; 3, *colour*; 4, *comb* (single or double); and so on. Is it not possible, by addressing societies now in existence, your subscribers, and the public in general, for their views, some plan might not be found of selecting from the greatest number who nearest agree, what might be adopted by all societies, and so enable exhibitors, amateurs, and the public, to know upon what grounds they proceed? At present we are quite in the dark." We think it not only possible to attain such fixed rules, but what we have done, and are now doing, will attain them. Our pages are open to statements from any one of what they consider the most desirable and most important characteristics of any variety of poultry.

SPANISH *serpens* COCHINS (A Notice).—We quite agree with you that the statements made by *Gallus* are not conclusive that the Spanish is a more profitable variety than the Cochins China; nor will the question be set at rest, until, in two adjoining yards, under precisely the same advantages of warmth, feeding, &c., an equal number of equal aged birds have been tried against each other, and a regular debtor and creditor account kept. At the same time, *Gallus* is no small authority. We know he has some of the best Cochins in England, and his Spanish fowls have carried off many prizes.

LYCOPODIUM AND FERNS (Lycopodium).—You will see what you require in Mr. Appleby's communication to-day. The following is an alphabetical list of the genera of *Ferns*. Some of them are omitted in *The Cottage Gardener's Dictionary* because not meriting cultivation:—*Acrostichum*; *Allosorus*; *Asplenium*; *Allantodia*; *Antrophyum*; *Adiantum*; *Alsophylla*; *Aspidium*; *Anemia*; *Blechnum*; *Balanium*; *Botrychium*; *Ostera*; *Ctenopteris*; *Cheilanthes*; *Eliodorum*; *Cyathea*; *Doodia*; *Diplazium*; *Davallia*; *Dicksonia*; *Eliobocarpus*; *Gymnogramma*; *Gleichenia*; *Hemionitis*; *Hymenophyllum*; *Lomaria*; *Lonicaria*; *Lindaea*; *Lygodium*; *Monacium*; *Notholaena*; *Nipholobus*;

Onoclea; *Osmunda*; *Ophioglossum*; *Polybotrya*; *Polypodium*; *Parkeria*; *Pteris*; *Pleopeltis*; *Struthiopteris*; *Scolopendrum*; *Schisma*; *Tenitis*; *Trichomanes*; *Todea*; *Vittaria*; *Woodwardia*; *Woodia*; *Xiphopteris*. To these might be added *Danaea* and *Marattia*, for they closely resemble the *Ferns*, and require similar treatment.

SOWING ROSES (A. A. A.).—You will have seen what you require in our last number.

MELON PIT (W. B.).—Hartley's rough plate-glass will answer well for this.

HOMOEOPATHY (A Constant Reader).—We cannot insert testimonies either in favour or discredit of this system.

SEEDLING LENT FIGS (T. M. W.).—These may regain in the seed-pot until spring, when they may be potted off into single pots, but should they appear to be pinched up for room in the pot you have them in, place them in a larger pot at once, and let them remain out-of-doors until frost sets in, from which they should have protection in a greenhouse, or frame. More about your *Ornithogalum* shortly.

CAPE JASMINE (F. M.).—You will find full directions for this under *Gardenia*, in late numbers. Keep your plant growing freely after flowering; let it have more air to harden the buds before the end of Autumn; keep it cooler and drier during winter, and then start it into growth and bloom in extra heat in spring. Nothing suits it so well then as being plunged in sweet fermenting material. You have erred in keeping your plant dry at this season, unless you wished to bloom it in autumn or early winter. Average temperature; spring, starting it into bloom, 55° to 65°; in bloom, 45° to 60°; growing in summer, 60° to 75°; resting in autumn, 50° to 60°; winter and dry, 40° to 45°. Water most freely in the highest temperature.

RHODODENDRON LEAVES IN A PIT (P. S. H.).—These turning brown at the edges is no more than the old leaves frequently do, on the same principle that the leaves of the oak fall in autumn. If the young leaves do so from the fresh growth after flowering, there must be something wrong at the roots. A deficiency of water, or the branches have been exposed to too much heat and light. See an article by Mr. Fish to-day.

BEES (1 Recent Subscriber).—You may buy them now, taking care to select one that was a swarm of this year, and not less than twenty pounds in weight. Or you may wait until next spring, have the hives you prefer ready, and get a first swarm hived into it. As your object is to instruct your neighbours in the depriving system, buy *Payne's Bee-keeper's Guide*, and "*A Country Curate's English Bee-keeper*." The first is published by Messrs. Groombridge, and the second by Messrs. Hivington. In the country, ten shillings is the price of a hive of bees.

MORNING SIDE PRACTICAL GARDENERS' MEETING.—We are sorry that we cannot insert the report of the meeting. We have no space for readers generally, and they would be amused or interested by the list of local prize-winners.

NAMES OF PLANTS (J. K.). Your plant from Black Gang is *Epilobium parviflorum*. Yours is *Arenaria reptans*. B.—No. 1. *Solanum dulcis*. No. 2. *Bryonia dioica*. The leaves of the first are hastate; of the second, palmate. The leaves of the first, and all other leaves that have footstalks, are petiolate.

WEATHER AT THETFORD (NORFOLK) IN 1851.—

	Barometer	Thermometer	Rain	Prevailing Winds
January	29.87	43.	1.56	S. W.
February	30.	41.50	0.57	S. W.
March	30.02½	41.	2.83	S. W.
April	30.02½	51.	1.96	N. W.
May	29.80	56.50	0.85	N. W.
June	30.23	66.50	1.17	S. W.
July	29.96½	65.50	3.15	S. W.
August	30.25	65.	1.81	S. W.
September	30.27½	56.50	0.68	N.
October	30.	53.	2.08	S. W.
November	30.10	38.50	1.45	N. W.
December	30.25	44.	0.60	S. W.

SOLLIA HETEROPHYLLA (Turquoise).—This is the name of your plant; that is, the various-leaved *Sollia*. If you put six or eight cuttings round the side of a six-inch pot, in the spring, when the hotbeds are at work, you cannot fail to root them. Use for soil peat and loam, half-and-half, with a little sand. It must look very pretty on your wall (at Devonport) without any protection.

VARIEUR (Rev. R. M. E.).—The purple flower is the *Lythrum alatum*, a greenhouse perennial, which may be kept in a frame with a little attention. We do not know what the *Gladiolus* is if it is not *G. floribundus*; but that it is we have not much doubt. *Gazania ringens* will require protection as well as the *Lythrum alatum*.

PHLOX DECURVATA (M. J. D.).—This is one of the tall-growing, dark-flowered varieties; rising from three to four feet high; but the height of hardy plants entirely depends upon the soil and situation where the plant may be growing. *Decurvata* is so called from its four-ranked manner of growth; the leaves point out from the stem; but this may be said of all the *Phloxes*, but in particular of all the tall varieties. The name of your plant is *Manulea pedunculata*.

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DEANE'S WARRANTED GARDEN TOOLS.

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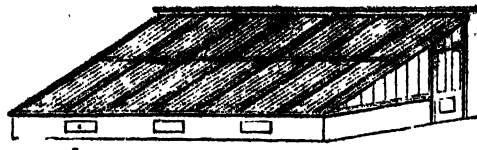
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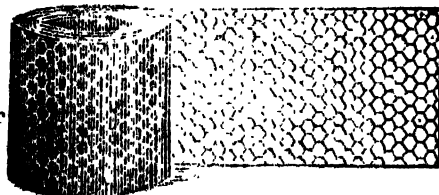
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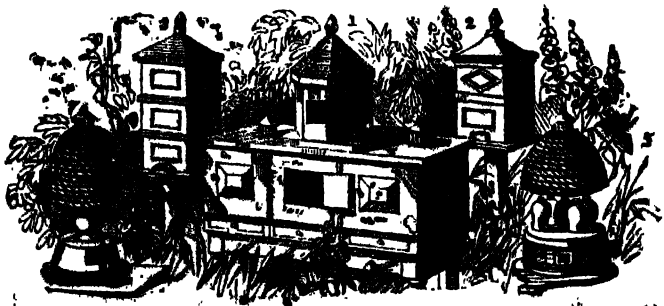


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WEEKLY CALENDAR.

M D	W D	AUGUST 26—SEPTEMBER 1, 1852.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock past Sun.	Day of Year.
			Barometer.	Therm.	Wind.	Rain in In.						
26	Th	PRINCE ALBERT BORN, 1819.	30.104—30.897	64—55	S.W.	11	5 a. 5	57 a. 6	0 48	11	1 33	339
27	F	Lady's Tresses sowers.	30.893—30.898	48—48	S.W.	1.33	7	50	2 4	12	1 15	340
28	S		30.739—30.659	61—44	N.W.	—	8	54	3 14	13	0 58	341
29	Sun	12 SUNDAY AFTER TRINITY.	30.698—30.707	59—45	N.	67	10	53	rises.	(?)	0 40	342
30	M	Ailanthus frutescens flowers.	30.180—30.024	83—33	N.	—	11	50	7 a. 42	15	0 28	343
31	Tu	Willow red-under-wing Moth seen.	30.340—30.178	68—51	W.	—	13	47	7 59	16	0 8	344
1	W	European Thick-knee diamonds.	30.510—30.155	76—38	S.W.	10	15	44	8 a. 15	17	0 16	345

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 71.7° and 46.6° respectively. The greatest heat, 94°, occurred on the 1st in 1871; and the lowest cold, 23°, on the 29th in 1850. During the period 106 days were fine, and on 69 rain fell.

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 71.7° and 49.6° respectively. The greatest heat, 81°, occurred on the 1st in 1878; and the lowest cold, 32°, on the 29th in 1850. During the period 106 days were fine, and on 69 rain fell.

NEW PLANTS.



ALLIED SPARGANTEM (Sphaerostema propinqua).—This is a curious, half-climbing, woody plant, a native of Nepal, whence it was sent to England, as far back as 1828, by Dr. Wallick. It flowered in 1851, at Kew, and is figured and described in the *Botanical Magazine*, t. 4614. The genus was founded by Blume, and is derived from *sphaira*, a globe, and *stema*, a stamen. The flowers are yellow, unisexual, the male, or stamens, being produced in one flower, and the pistil, or female, in another. The stamens are collected together in clusters, forming a globe-like body, whence the name. The fruit is a red berry, tasteless, and produced like currants, on long receptacles. It belongs to a small order of plants, little known in this country, called *Kadsurads* (Schizandraceae), after *Kadsura japonica*, another half-climbing plant like the present, not uncommon in British gardens. The structure of the wood of this plant has often been remarked as very curious, being destitute of the usual annual rings. It is the *Kadsura propinqua* of Dr. Wallick. It was observed by Dr. Hooker, in the Sikkim Himalaya, at an elevation of 9,000 feet. The flowers are fragrant, and the shrub, as a whole, handsome. The natives eat the berries. Leaves pointed, egg-shaped, on short foot-stalks, slightly toothed at the edge, milky green below, alternate. Male flowers have nine sepals arranged in threes, pale yellow, and like a corolla; anthers twelve to sixteen in number, without any filament. Female flowers composed of sepals like those of the male; style none.—J. B.

Culture and Propagation.—This has been hitherto considered as a warm greenhouse plant, but I am almost sure that is a mistake, and it is nearly hardy; at least, as hardy as *Kadsura japonica*, which stood out with me for several hard winters without injury. From Nepal it extends to the Sikkim Himalayahs, and we have hardy plants from the same range where this was found. It grows well against a trellis. The *Kadsurads* all strike very readily from cuttings, and will grow in any good garden soil. J. B. BEATON.

THE hope we expressed that a recurrence of fine dry weather at the commencement of August would be vouchsafed, has not been realized. On the contrary, we speak of the south of England, there has been a series of wet mild days—weather the most conducive to the occurrence of the potato murrain, and evidence accumulates that it is very prevalent, but not to the extent interested parties represent. Letters pour in upon us, some stating that it prevails alike in the late and in the early-planted, and others even bring forward evidence to prove that the late-planted are most free from disease. We will print one of these testimonies from a trustworthy correspondent, and then add our commentary. His letter is dated August 14th, and is as follows:—

"I think there is no point more strongly maintained in your publication than the advantage of planting potatoes

very early; and feeling great respect for the opinions of your writers, who are generally professional men, I determined to do as they advised. I always plant a few early potatoes in my garden, and my main crop in one of my farmer's fields, who never objects to the room I occupy, provided I clean and manure the land. My gardener did what I recommended at once; but when I told the farmer I wished to plant my potatoes in February, or, at the latest, in March, and said what THE COTTAGE GARDENER had written, he laughed, and said 'He knew better than any of them.' He added that 'Them men who writes in books about such things, don't know half so well as we farmers, that have to pay rents and live by our farms, and I knows that the potatoes planted early is not half so good as them that is put in late.' Well, by a little perseverance, I persuaded him to let me plant my potatoes in March, while he delayed putting on his until May. Mine, of course, were much forwarder in growth than his; but I did not find that they ripened much sooner. At last, the time came in autumn when they were all to be taken out of the ground, and conceive my surprise when I tell you that his were far better

than mine,—more in number, larger in size, and less diseased. [Were they not different varieties?] Now, then, I had not a word to say to the farmer; but I still thought I would follow your advice in my garden, and this year I planted my Ash-leaved Kidnies and Forty-folds (this last, in my opinion, being by far the best potato) rather early; and about a month afterwards, seeing a space at the end of my potato-bed wide enough to receive another row, I desired my gardener to put one in. He did so; and this morning we took up all that remained after our summer's consumption. Now, then, read again the result. All my potatoes are in some degree diseased, but those that were planted a month later than the others, are far the best, being more in number, larger in size, and not one quarter so many diseased. [Were they the same varieties?] Something may be said in regard to the part of the country where the potatoes are grown, for what may be well in the south may be injurious in the north, and, perhaps, every farmer knows best what is proper for his particular situation; but allow me to make a remark that applies generally. The disease is still a mystery, and the cure is still to be discovered; but we find the potato is never attacked till after it has remained a certain time in the ground. Now, may it not be advantageous to curtail that time as much as possible, and not to put the seed into the ground a day before it is absolutely necessary to give it time to ripen? By doing so, you avoid the spring frosts, and give the disease less time and opportunity to mature itself and make the attack.—J. C.—n.”

Now, the simple answer to our correspondent is—Whoever grows a variety of potato that is not ripe until autumn, or even until mid-August, will never escape from liability to extensive loss by the murrain. We this year grew four varieties—*Walnut-leaved Kidnies*, planted in February, and taken up in the middle of July without a diseased tuber; *Ash-leaved Kidnies*, planted in November, and taken up in the middle of July with not more than one tuber in fifty diseased; a new *Shropshire variety*, and *Martin's Seedling*, planted in November, and now (August 17th) only fit to take up, and full one-sixteenth of the first, and about one-twenty-fourth of the second, rendered useless by the murrain. We were persuaded to grow the two last kinds because very productive. If the sets are kept sound and unshrivelled, and the sprouts uninjured, we do not care much whether they are planted in February or November; but we consider it essential that the variety should be ready for storing, that is, that its tubers should be perfected before July is ended.

Then, again, we have wearied ourselves, and we fear our readers, in warning all potato planters against manuring for this crop. Now our correspondent seems to have been compelled to neglect this rule, for he says his tenant farmers do not object to let him have plots for the culture of potatoes, “provided he cleans and manures the land.” Now all evidence goes to establish the fact that manured potatoes are more frequently and more extensively diseased than those grown on land unmanured for them. This testimony is not borne by British cultivators only, but the chorus is increased from the Continent. “In a few parts only of Germany,

* To show how testimony varies, we give the following from the pen of our correspondent, “UPWARDS AND DOWNWARDS.” “Every year, since the murrain appeared, my potatoes have been affected with it more, or less, though they are not so to near the extent this season as usual, owing, I am bound to believe, from their having been planted last November. This autumn-planting system I was very wary of adopting, and tried it three years; the result proved to me it was good; so this year, the whole of my crop, with the exception of the early Ash-leaved Kidnies, is thus planted, much to my satisfaction. I intend to continue it for the future, as I strongly recommend it.”

especially in Thuringia,” says Dr. Schleiden, “a custom has been pretty well established not to plant potatoes in fresh manure, but as the third or fourth crop, and generally after clover, and these parts are precisely those which remained the longest free from disease, and which suffered the least.”—*Journ. Hort. Society*, vii., 190.

One of the reasons why manure is injurious to potatoes seems to be, that it keeps them longer in a growing state; and another reason seems to be, that it supplies them with an excess of phosphates of lime and magnesia, which phosphates are found to be excessive in the murrained potatoes.

Our correspondent is quite right in his inference that it is “advantageous to curtail the time as much as possible” that the potato is in the ground; but the time to be curtailed, by every effort, is the time that the growing tubers are in the ground, not the time that the sets are so situated. It is to shorten that time—to have the growing tubers in the soil during the months of May, June, and July only—that we recommend early planting, early ripening varieties, and no earthing-up; for late planting, and earthing-up, delay the period of the tubers ripening.

We entirely agree with our correspondent that the nature of the disease is a mystery. The facts that the tubers on seedling plants, and that diseased and sound tubers occur on the same plant, set at defiance most of the theories which have been suggested; and there are other facts which are similarly incompatible with other speculative explanations. It may be that the murrain, as Dr. Schleiden suggests, is independent of temporary causes, and will never disappear. It may be that the potato, like other plant-varieties created by culture, has reached the period when permanent decline is established. All these are but “may bes,” and it is consolatory to know that every one of them is counter-balanced by its parallel “may not be.”

It is more useful just now, in the imperfect state of our knowledge of the disease, to keep our attention fixed on modes of escape from its attack, rather than on speculations as to its nature, or remedies in case of its appearance. Now, there is no one denies that there are two precautions, which, if adopted, are certain to preserve the crop from serious loss. They are these:—

1. *Grow a variety that is ready for storing in July, and the earlier in that month the better.*
2. *Grow it in a light, unmanured soil.*

Let no one neglect those rules, and we recommend these as the results of our own experience:—3. Keep the sets in dry sand, or ashes, in a cool, dry place, until wanted. 4. Plant early—not later than the end of February. We plant in November. 5. Plant whole tubers, and each about two-and-a-half ounces in weight. 6. Do not earth-up the stems, but, when some of the tubers appear above the surface, merely draw around the stems about an inch in depth of earth.

FORSYTH MSS.

WILLIAM PATERSON was a native of Scotland; and probably of Montrose. His parents seem to have been

in humble life, for when he had attained to affluence, and writing to Mr. Forsyth when about to return from India, in 1784, he says, "One hundred pounds must be kept ready to defray my expenses down to Scotland, where I must go and see the old people very soon after my arrival. Pray write them a comfortable letter, and tell them I am well, though, by-the-by, I am not."

Of Mr. Paterson's early career we have been unable to obtain any information, and the first letter among these MSS. is dated from Saldanha Bay, a little to the westward of the Cape of Good Hope, in the June of 1781. He was then in the fleet commanded by Admiral Hughes, and serving as a military volunteer with the troops on board. "From the Cape," he says, "our destination is to the East Indies, and it is expected it will be Madras. I expect a commission by the time we arrive, and after we are settled you may expect a part of everything that I can collect, and, believe me, I never shall forget your past kindness." One expectation was realized, for before the close of the year he became an ensign in the 98th Regiment, but getting into the S.E. monsoon, the fleet, instead of sailing to Madras, was driven up to Bombay, touching previously at the Island of Johanna, and Morabat Bay, on the coast of Arabia. Writing on the 5th of December, 1781, to Mr. Forsyth, he says:—

On the 2nd of September we arrived at Johanna Island; we were, at that time, at 1½ pint of water per day, and that we distilled from the sea. Between St. Jago and that place we lost about 54 men, who all died in the scurvy; and most of the men were landed sick. You will excuse my not giving any particular account of that island, as there is a very great uncertainty of your receiving this, as it comes by a ship which is obliged to leave the fleet, owing to her bad sailing. I shall only tell you that, during our stay, I examined great part of Johanna, where I found great numbers of very curious plants, many of which I am certain are new; and you may expect some seeds and specimens by the first fleet that sails from Bombay.

From Johanna we have had a very tedious passage, and on the 24th of November we arrived at Morabat Bay, on the coast of Arabia Felix, which is the most barren country I ever beheld. I have been several excursions up the country, and only found one species of Aloe, and some *Mimosa*s, which were growing on the naked rocks.

We met with very little supply at this place—only a few goats, which they feed with fish. The town of Morabat contains about 500 inhabitants, and are much oppressed by what they call the Biduc Arabs, or wandering Arabs, who come down from the mountains and attack them; they are armed with lances and matchlocks. Of all these places I shall give you a full account when we arrive at Bombay.

I am now gone out of the Royal Charlotte, and am now on board the *Isis*, man-of-war, where we proceed on to Bombay as fast as possible. The rest of the ships remain here for some time; the three men-of-war and two transports go on with the 98th regiment, and the 100th regiment, and additional companies are left with the remainder of the ships. I am in the same ship with the colonel, and am ensign in his company. I am sorry to acquaint you that we have lost, in the fleet, 18 officers, and about 600 soldiers, and at present great numbers sick. As for my own part, thank God, I never enjoyed better health than I have done ever since I left England.

A notice by him of an electrical fish, which he discovered at the Island of Johanna, was published in 1786, in the 76th volume of the *Philosophical Transactions*.

GOSSIP.

It is with very great regret that we have to announce that Mr. J. A. Downing, of New York, whose work on Landscape Gardening we have more than once mentioned with approbation, was one of the many passengers who perished by the burning of the *Henry Clay* steam vessel on the waters of the Hudson River. How varied—how eloquent of human short-sightedness—are the thoughts now suggested by his praises of that mighty stream. Never does he mention it without some expression of admiration, yet within three short years it has become his grave.

That new and beautiful climber *Raphistemma pulchella* is now finely flowering in the orchid house at Messrs. Weeks and Co., King's Road, Chelsea. The flowers are produced in bunches, like the *Stephanotis floribunda*, but is larger, a more profuse bloomer, and sweet-scented. At first it is of a whitish rosy hue, afterwards turning to a rich lemon colour. It is a most rapid grower; a small plant shifted into a small pit covered nearly one hundred feet of wire trellis in about five months. Altogether the foliage and flowers make a splendid appearance. This is a most desirable, useful plant, and is invaluable for ladies' bouquets.

The same nurserymen have a new *Hybrid Pea*, which can be used in various ways. When young, cut up like a French bean; further advanced, the peas can be shelled out and boiled as other peas; or the pods and peas boiled together. Either way, we are told, they are most delicious. This variety grows to the height of four feet, has very slender haulm, is highly ornamental both in growth and flower, and a most abundant bearer.

We hope and expect to see the time when *Crystal Palaces* will be erected near most of our large towns. One, the funds to be raised in five pound shares, is proposed at Bath; another at Liverpool; and Mr. Thomas Woolcombe, the Chairman of the South Devon Railway Company, has brought forward a grand scheme for public gardens for the combined towns of Plymouth, Devonport, and Stonehouse, with their 120,000 or 130,000 inhabitants. It embraces gardens to the extent of from twenty-five to thirty acres, and the erection of a crystal palace covering an acre of ground. The cost of laying out, and the crystal palace, is estimated at £25,000, of which Sir Joseph Paxton is of opinion the crystal palace would cost about £12,000. The present notion is to raise the money by debentures.

The *Gardens of Blouston Castle* can only be seen on Fridays, between ten and two o'clock. Parties applying on other days, and at other hours, will be henceforth invariably refused admittance. The house is never allowed to be seen, and no eatables are permitted to be taken within the park or grounds. This notice is inserted to prevent parties from giving themselves the trouble of going on other days, as under no pretext whatever can they be admitted. After two o'clock on Fridays no one is allowed to enter.

We have long had before us for notice one of the most interesting books of the season, and to-day we will

begin by extracting from it a notice of the *Hong-Kong gardens*. The volume we thus praise and quote is Mr. Fortune's *Visit to the Tea Districts of China and India*.

"I have always thought that, although various causes may operate to render Hong-Kong unhealthy, yet one of the principal reasons is the absence of trees and of the shade which they afford. In a communication which I had the honour of making to the Government here, in 1844, I pointed out this circumstance, and strongly recommended them to preserve the wood then growing upon the island from the Chinese, who were in the habit of cutting it down annually, and at the same time to plant extensively, particularly on the sides of the roads and on the lower hills. I am happy to say that these recommendations have been carried out to a certain extent, although not so fully as I had wished. It is well known that a healthy vegetation, such as shrubs and trees, decomposes the carbonic acid of the atmosphere, and renders it fit for respiration; besides which there is a softness and coolness about trees, particularly in a hot climate, that is always agreeable.

"Many of the inhabitants have taken up the matter with great spirit, and have planted all the ground near their houses. Some of them have really beautiful gardens. I may instance those of His Excellency the Governor, at "Spring Gardens;" of Messrs. Dent and Co., at "Green Bank;" and of Messrs. Jardine and Matheson, at "East Point." In order to give some idea of a Hong-Kong garden I shall attempt to describe Messrs. Dent's, which was then in the possession and under the fostering care of Mr. Braune:—

"This garden is situated on the sloping sides of a valley, near the bottom of one of the numerous ravines which are seen on the sides of the Hong-Kong hills. It is near the centre of the new town of Victoria, and is one of its greatest ornaments. On one side nothing is seen but rugged mountains and barren hills, but here the eye rests upon a rich and luxuriant vegetation, the beauty of which is greatly enhanced by the contrast.

"Every one interested in Chinese plants has heard of the garden of the late Mr. Beale, at Macao, a friend of Mr. Reeves, and like him an ardent botanical collector. Nearly the whole of the English residents left Macao and went to Hong-Kong when that Island was ceded to England, and all the plants in Mr. Beale's garden which could be moved with safety were brought over in 1845, and planted in the garden at "Green Bank."

"On entering the garden at its lower side there is a wide chunamed walk, leading in a winding manner up the side of the hill, in the direction of the house. On each side of this walk are arranged the trees and shrubs indigenous to the country, as well as many of the fruits, all of which grow most luxuriantly. *Ficus nitida*, the Chinese banyan, grows on the right-hand side, and promises soon to form a beautiful tree. This is one of the most valuable trees for ornamental purposes met with in the south of China; it grows rapidly, with but little care, its foliage is of a glossy green colour, and it soon affords an agreeable shade from the fierce rays of the sun, which renders it peculiarly valuable in a place like Hong-Kong. The India-rubber tree (*Ficus elastica*) also succeeds well in the same part of the garden, but it grows much slower than the species just noticed. On the other side of the main walk I observed several specimens of the Indian "noem" tree (*Melia Azedarach*), which grows with great vigour, but it rather liable to have its branches broken by high winds, owing to the brittle nature of the wood. This defect renders it of less value than it would otherwise be, particularly in a place so liable to high winds and typhoons. This same *Melia* seems to be found all round the world in tropical and temperate latitudes; I believe it exists in South America, and I have seen it in Gibraltar, Malta, Egypt, Aden, Ceylon, the Straits, and in the south and north of China, at least as far north as the 31st degree of north latitude. Amongst other plants worthy of notice in this part of the garden are the Chinese ginseng, the pretty *Aghia odorata*, and *Murrays exotica*, both of which are very sweet scented, and much cultivated by the Chinese. Two specimens of the cocoa-nut palm imported from the Straits are promising well. Other fruits—such as the loquat (*Eriobotrya Japonica*), the Chinese gooseberry

(*Averrhoa Carambola*), the wangpoo (*Cookia punctata*), and the longan and leeches—are all succeeding as well as could be expected, considering the short time they have been planted. The *Pinus sinensis*, which is met with on the sides of every barren hill, both in the south and north of China, and which is generally badly used by the natives, who lop off its under branches for fuel, is here growing as it ought to do. The Chinese have been prevented, not without some difficulty, from cutting off the under-branches, and the tree now shows itself in its natural beauty. It does not seem to grow large, but in a young state, with its fine green foliage reaching to the ground, it is not unhandsome.

"As the main walk approaches the terrace on which the house stands, it turns to the right, between two rows of beautiful yellow bamboo. This species of bamboo is a very striking one, and well worthy of attention in England; the stems are straight, of a fine yellow colour, and beautifully striped with green, as if done by the hand of a first-rate artist. I sent a plant of it to the Horticultural Society in 1844.

"At the bottom of the terrace on which the house stands there is a long narrow bamboo avenue, which is called the "Orchid Walk." This always affords a cool retreat, even at mid-day, as the rays of the sun can only partially reach it, and then they are cooled by the dense foliage. Here are cultivated many of the Chinese orchids, and other plants which require shade; among them I observed *Phaius grandifolius*, *Cymbidium sinense* and *aloifolium*, *Acridas odoratum*, *Tanda multiflora* and *teretifolia*, *Renanthera coccinea*, *Fernandezia ensifolia*, *Arundina sinensis*, *Habenaria Susinna*, a species of *Cypripedium*, and *Spathoglottis Fortani*. There are also some other plants, such as *Chirita sinensis*, the "man-neen-chung" (a dwarf species of *Lycopodium*, highly prized by the Chinese), and various other things, which, taken altogether, render this shaded "Orchid Walk" a spot of much interest.

"Above the "Orchid Walk" is a green sloping bank, on which are growing some fine specimens of bamboos, *Poinciana pulcherrima*, myrtles, *Gardenias*, oleanders (which thrive admirably in China), *Croton variegatum* and *pictum*, *Magnolia fuscata*, *Olea fragrans*, *Dracena ferrea*, and *Buddlea Lindleyana*. The latter was brought down from Chusan by me in 1844, and is now common in several gardens on the island, where it thrives well, and is almost always in bloom, although the flower-spikes are not so fine as they are in a colder climate. A large collection of plants in pots are arranged on each side of the broad terrace in front of the mansion. These consist of camellias, azaleas, roses, and such plants as are seen in the Fa-tee gardens at Canton; many of the pots are prettily painted in the Chinese style, and placed upon porcelain stands."

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

- ABERDEENSHIRE, Sept. 17. (Sec. G. Reid.)
- ALLENDALE, Sept. 11th. (Secs. G. Dickinson and G. J. French.)
- BATH, Sept. 16th. (Sec. H. T. St John Maule, Esq.)
- BRIDGEWATER, Sept. 22. (Secs. Mr. J. Leaker and Mr. J. Hayward.)
- BRIDGE, Sept. 15th. (Sec. Mr. D. Nainby, Jun.)
- BURY ST. EDMUNDS, Sept. 10 (Abbey); Nov. 26 (Chrysanthemums). (Sec. G. P. Clay, Esq.)
- CALEDONIAN (Inverleith Row), Edinburgh, Sept. 2, Dec. 2.
- CHELTENHAM, Aug. 26.
- CHEPSTOW, Sept. 14. (Sec. J. F. Hartland.)
- CLAPHAM, Sept. 11.
- COLCHESTER and EAST ESSEX, Sept. 8, at the Rev. T. Round's grounds, Holly Trees, All Saints.
- COVENTRY and WARWICKSHIRE, Aug. 31st. (Sec. Dr. Phillips.)
- DUMFRIES and GALLOWAY, Sept. 9th. (Sec. Mr. W. G. Johnstone.)

- DURHAM, Sept. 8.
 FORBESHIRE (EASTERN), Sept. 15 (Arbroath).
 GLASGOW, Sept. 10.
 HAMPSHIRE, Sept. 9 (Southampton), Nov. 18 (Winchester). (Sec. Rev. F. Wickham, Winchester.)
 HERTS, Sept. 15, 16.
 HULL, Sept. 10.
 KIRKCALDY (Fife-shire), Sept. 9.
 LINCOLN, Sept. 14.
 LIVERPOOL, Sept. 2 (Botanic Garden).
 LONDON FLORICULTURAL (Exeter Hall, Strand), Sept. 14+, 28, Oct. 12+, Nov. 9+, 23, Dec. 14+.
 MIDDLESBROUGH. In-door Show. Sept. 8. (Sec. Mr. J. G. Smith, Week-street.)
 MID CALDER (Parish school-room), Sept. 10.
 NEWBURY, Sept. 3.
 NORTH LONDON, Nov. 23, Chrysanthemum.
 NORTHAMPTON, Sept. 27, Dahlia.
 OXFORDSHIRE (ROYAL), Sept. 23. (Secs. O. Tawney and W. Undershall, Esqrs.)
 PEBBLES-IRE, Sept. 14th. (Sec., J. Stirling.)
 PONTELAND (Newcastle-upon-Tyne), Sept. 8. (Sec. Rev. J. M. St. Clerg Raymond.)
 SOUTH DEVON BOTANICAL AND HORTICULTURAL, Sept. 7. (Sec. J. Cree Hancock, Esq., Stonehouse.)
 SOUTH LONDON (ROYAL), Sept. 2+, 8, Oct. 14+, Nov. 11+, Dec. 9+, 16.
 SHACKLEWELL, Sept. 1.
 SURREY AMATEUR (George Canning, Grove Lane, Camberwell), Sept. 15, Dahlia.
 TURRIFF, Sept. 17.
 WHITEHAVEN, Sept. 17, Dahlias.
- POULTRY SHOWS.
- BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
 BRISTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Marnmont.)
 BURY AND RADCLIFFE (Lancashire), Sept. 3 (Radcliffe).
 CORNWALL (PENZANCE), about a week after the Birmingham. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)
 MANCHESTER AND LIVERPOOL, Sept. 23. (Sec. Mr. H. White, Warrington.)
 ROYAL NORTH LANCASHIRE, Aug. 26th, at Preston.

THE LAST EFFORT IN FRUIT-TREE CULTURE.

THIS may appear a strange title, but, nevertheless, one more apposite to the subject in hand could scarcely be selected. It is well known, that the fine-spun-systems of training adopted some twenty years since, have lapsed into a state of comparative disuse, and shrunk into insignificance before the much more important question of ripening the wood. And now, "a word and a blow" be the maxim; the blow first, if you will. Those who have acted on the oft-repeated advice in *THE COTTAGE GARDENER*, as to an early dressing of the wood, will have little now to perform; but for the sake of those who have procrastinated, and young beginners, we feel induced to go over some of the fruits in detail.

1st. THE PEACH, including, of course, the NECTARINE. Gross trees will produce more lateral spray through August than at any other period, providing the weather has been moist and warm. If they have been well stopped betimes, they will, in endeavouring to burst their bondage, spawn forth branches of young twigs at their terminal points, more like a willow stool than aught else. Let not our readers feel alarmed at this wantonness, but continue to pinch away until a cessation of this over-active condition takes place, which will be the case in September. At the same time, and on the same tree, let care be taken to encourage growth to the very last on all weak portions. This is the time, and these are the circumstances under which the equilibrium of the branches is established. Every gross

shoot that is stopped but relinquishes a portion of the strengthening fluid to its weaker neighbours. Now, is not this better by far than the plan of former days, when we might see trees with shoots a yard long on the one portion, and others dwindling into utter insignificance before the gigantic power exercised by these vegetable monopolists? And what was the practice at the winter-pruning in those times? "Oh!" said the man of the blue apron and crooked knife, "you must cut these stray shoots back to an eye or two, or they will 'run away with the tree!'" Well may the old pruning-knife be ashamed to show itself in broad daylight after such monstrous revelry. In those days, it might be seen poking its impudent nose from a slit in the corduroys, just above the tip of the king of spades; now it rests quietly concealed in the pocket of a neat kersey vest, and dignified, forthwith, with a dainty white handle, the emblem of innocence, we suppose, as compared with its ancestry. It need hardly be repeated here, that whatever shoots remain loose from the wall should be fastened close to it, without a moment's delay, for all the heat of the wall will be required, henceforth, to carry out the solidification of the wood. This is the way to provide against the blossom-castings, &c., of the ensuing spring. There can be little doubt that not only the wood itself, but the very parts of fructification are thereby rendered capable of enduring a much lower temperature.

And now, the fruit must be considered; in all our more northern counties, of course ripening. In order to get the fruit of high colour and good flavour, a degree of sunlight, acting immediately on the fruit, is requisite. It is not with the peach as with the grape: in the latter case, the immediate action of sunlight would be prejudicial to size, colour, and flavour. That such is best adapted to the end in view, is best attested by the natural habits of the trees respectively. In their natural clime, the peach, shrouded in its grossness by a sunlight far beyond that of Britain, is not productive of that profusion of green spray that the British peach is liable to; but the vine—who has not heard of the vine-dresser? Every part almost of the Sacred volume contains beautiful similes, in which the vine and the vine-dresser play a most important part. The fair inference, then, is, that the vine, unsubdued by intense solar light and heat, produces a profusion of spray; need we add, that the fruit *must* be subject to a considerable amount of shade.

It is the practice with all good peach growers to take extra measures, whilst ripening, to throw sunlight on the fruit; and in order to carry this well out, it becomes requisite to remove a few of the leaves around each peach, sometimes totally plucking them away, and occasionally pinching halves away. This course is more particularly necessary with the late kinds, and in our northern districts. The best time, we think, to commence this operation, is the moment the fruit commences colouring; thus pointing to the time when *nature would have it done*. To totally unshade the fruit earlier would be to lessen its size, and, indeed, detract from its quality in many cases, by hurrying the ripening process in an inordinate way. About the end of August, then, we say, stop every shoot on your peach-trees which has made a foot of growth. This is meant to apply to the early-made wood; as to the late and watery spray, and all those secondary shoots, the result, in the main, of former pinchings, off with their heads from this time forth, as soon as they have grown three inches. This persisted in, the roots will gradually acquire a degree of torpidity, and the certain result will be, larger fruit, and an earlier sinking to rest—productive, of course, of firmer wood and increased hardihood during the ensuing year.

APRICOTS.—By the time these remarks reach our readers the fruit will be all gathered; and generally,

close on the heels of their removal, healthy trees lay in more sap by a *last effort* at growth. Now, there is no objection to this, so long as no late spray is allowed to shade the natural spurs or blossom-buds for the ensuing year. This must, by no means, be permitted. A great portion of the bad setting, so frequently complained of, is chargeable on this bad practice. As far as our experience goes, no fruit requires so much intense sunlight acting *immediately* on the embryo fruit buds for the ensuing year, as does the apricot. Hence the reason why, in some parts of the country, we are frequently astonished to observe splendid crops on the gable or chimney side of some cottage or farm-house. Not that the sun shines any hotter on the cottage than on the garden wall; but that the cottager, like the cat in the fable, has but one shift with his Moorpark—viz., to cut away all breast shoots betimes, “to save farther bother.” But here behold the difference at the root between the cottage apricot and the pampered tree of the garden! The first, planted in an off-hand way originally, amongst ordinary soil, foundation stuff, and scrapings of any kind, and most likely a bed of exhausting herbaceous plants, or ordinary flowers and shrubs, standing for years over the roots; or, it may be, a stone pavement. In our kitchen-gardens, how different the conditions. The most powerful soils, prepared some thirty inches deep, and afterwards a system of vegetable cropping carried on, requiring, perhaps twice a-year, a vast amount of manure. This, with the occasional infringements of the spade, produces, of course, fitful growths, productive of an undue amount of shade: whilst the cottager’s produces just enough wood annually to enlarge the fabric of the tree a *little*—and only a little. Such we have witnessed in hundreds of cases in the north-west of England, and have not unfrequently been shamed by the superior crop of a clodpote.

Our advice, then, is—the moment these remarks meet the eye, let every “breast shoot,” productive of shade to the little nests of blossom-buds beneath, be henceforth close pinched. If, however, any terminal points are still disposed to ramble, and thereby enlarge the tree, and cover naked spaces of walling, by all means let them do so as long as they please.

PEARS.—All the more tender kinds, as *Winter Neilsa*, *Beurre Rance*, *l’Aremberg*, *Colmar d’Auch*, *Puget Colmar*, *Ne plus Meuris*, &c., will be immensely benefited by total removal of all immature-looking spray. All such may be at once known by its pale colour, by its succulence, and even by a tendency still to extend. Those on the quince stock may, unless very gross, be allowed to grow as long as they please; for the probability is, “taking them in the lump,” that they will make too little wood.

We are going over our Pears now, August 10th, and slipping off every young shoot produced from the points of those pinched in May and June. In addition, the point of every growing shoot is pinched, excepting leaders, those required to extend the frame-work of the tree. In all bearing trees, too, of some age, the terminal points should be left growing to the last, in order to attract the sap well to the extremities, thereby inducing a constant supply to the fruit in its passage. How often do we see pears heavily laden at the extremities, yet barren at the lower portions, where a constant disposition exists to produce breast wood, coarse as a forest tree, the extremities meanwhile starved, and the fruit half-fed. This is traceable to the old spurting system, or the leaving, originally, a heel of the young breast shoot with the fallacious idea of producing spurs.

That such have occasionally produced spurs, we do not deny; but if true to themselves, and their conditions, coarse robbers must be the result in ninety cases out of a hundred. How is it likely that the fruit can be duly nourished, when the sap is appropriated by these as fast

as it is produced. In addition to these proceedings, those who have been neglectful at the proper period had better go over their trees, and remove all the useless shoots—those which would not be reserved at the winter’s pruning.

CHERRIES, PLUMS, &c., will require a little examination, especially the latter; but these will give little trouble; the principles of handling are nearly identical with the pear, &c.

ALPINE STRAWBERRIES should have every late runner trimmed away, and slate, or some impervious material, placed beneath them, giving it a slight inclination to cast off the wet. These, in dry weather, would enjoy a watering with liquid manure.

AUTUMNAL RASPBERRIES.—Every useless sucker should be plucked away in the end of August, in order to get sunlight on the fruit. If they appear poor, liquid manure may be given with great advantage; of course mulchings have been applied. R. ERRINGTON.

RHODODENDRONS

THE next six weeks, or two months, being the best time in the year for removing and transplanting hardy Rhododendrons, I shall put together to-day the notes and observations I have made for a long time on this family, so as to refresh the memories of our readers who are about to remove all, or one-half, of their best Rhododendrons, so as to give them double the room, and enable the plants to have freedom on all sides, that they may bloom down to the surface of the ground, each plant being a full specimen in itself, of which nothing can be seen but leaves and flowers. Whenever you can see a stem, or any part of a Rhododendron’s wood, that grows as a bush in the flower-garden, unless the plant is a standard, depend upon it that plant has either been badly managed in former days, or else it is a variety not worth cultivating, owing to its bad habit of growing in a loose, straggling way. Twenty years ago, last May, I walked round a single plant of a common Rhododendron, not far from the Botanic Garden, at Manchester, and it was just thirty steps, or thirty yards, in circumference. It was then not more than five feet high, and not the least branch could you see all the way round; nothing but leaves and blossom buds. Ten or twelve years after that, I saw a bank of Rhododendrons on the north-east side of a kitchen-garden, the wall of which was twelve feet high, but some of the Rhododendrons were higher than the wall. They were planted quite thick, nobody there knew when, and nothing in the way of thinning or pruning was done to them ever since, and of all the horrors ascribed to the influence of the night-mare, none could come up, in my eyes, to those presented by this long bank of lanky Rose-bays. My third instance is of a *spruce* old gardener, who made a fuss in his day, but not with Rhododendrons, for he went to a great expense in making large boundary belts and borders of Rhododendrons for the pleasure-grounds of his employer, one-half of bog, and one-half of peat, or heath soil, for some, and all the compounds possible with soils for others; also, he had the opinions of Mr. Standish, Mr. Hosea Waterer, and Mr. John Waterer, of Bagshot, the greatest Rhododendron merchants in the world—but all would not do. This gardener could not bloom a Rhododendron out of some thousands, worth looking at; and for nine or ten years he tried all the experiments with them that have ever been suggested, but all with the same result. In short, this gardener could not grow Rhododendrons at all; and the cause of his failure was, that his beds were cut out of chalk, or so near the chalk that the Rhododendrons would not live above two or three years in that garden. Some said that it was the peat that did not suit them; others maintained that the open and

exposed-to-the-sun situation of the garden was the cause of failure. Among other questions, I was asked what I thought of exposing Rhododendrons to the full sun on a poor bottom. I could not call to memory having ever seen fine Rhododendrons growing on chalk, but I had seen beautiful specimens of them growing and flowering luxuriantly on the steep braes of the Malvern hills, near Worcester, where they were as much exposed to the full mid-day sun, and on as steep ground as you could find on Arthur Seat, near Edinburgh, or the Peak of Teneriffe itself.

It is a mistaken notion altogether, that because Rhododendrons will grow in the shade of trees better than most other evergreens, that shade is essential to their well-being, and that they will not flourish on steep banks and declivities facing the south, if the soil is suitable. Rhododendrons will grow on the steepest mountain ranges, as well as in the deepest shade in the lowland woods; but chalk or calcareous earths are unpalatable for the whole race in any situation whatever, and it is almost the same with all those we call American plants, and yet the early spring Heath, called *herbaea*, will luxuriate in a chalk-pit, if it gets a little sandy soil to begin with. There is one situation, however, and one only, where the more straggling and the more bare of leaves a Rhododendron is, the more it is in character, and that place is the "wilderness," or "dingle," in large places,—the rockery, or rock-garden, where such names are preferred for imitations of wild, broken scenery.

Unless Sir Joseph Paxton will give us some imitations of the steep, rugged banks of the river which runs down from Chatsworth and Bakewell, by the Peak of Derby, in the new Crystal Palace, he may grow the large Indian Rhododendrons in it, but they will not be in natural character. It is now just fifty years since the father of all the best and choicest flower garden Rhododendrons, *Catawbiense*, was first made known to the gardening world by a figure of it in Michaux's North American Flora, published at Paris; and we have it on the best authority, in Mr. Hogg's valuable memoir (*The Cottage Gardener*, 250), that the Rhododendron was first discovered on the top of the Great Roa, or Bald Mountain, near the source of the Catawba River, where nothing but the short, stunted grass could shade, even its roots, from a summer sun, of the strength of which we have little idea in England, so that we need not seek the shady side of a garden, much less the shade of trees, to plant Rhododendrons in.

In cottage gardens, there is no plant more hardly dealt with than the Rhododendron. It is either stuffed in under trees and coarse-growing shrubs, where nothing else would grow, or, if there is a bed or clump set apart for Rhododendrons, the plants are sure to be so thickly planted, that in three or four years they run into each other, and get so much crowded, that all their bottom leaves and branches are smothered, and no flowers appear but on the very top of the plants. Now, it is proper and lawful enough to plant your new Rhododendron bed, in the first instance, so that the lower branches will nearly meet, but then we must bear in mind that the branches of the two nearest Rhododendrons may never actually meet or cross one another; and if they do so the first or second year after planting, the bed ought to be re-arranged. It is not, therefore, by the number of years, but by the growth of the plants, that we ought to be guided in keeping our Americans to their "boundaries." Still, as a general rule, it has been the practice for many years with the best gardeners to take up their best Rhododendrons in beds every third, or fourth year, so as to give them more room, that they might flower down to the very soil; and although they could be thus dealt with almost any time in the year, experience has determined that from the

middle of August to the end of September is the best time to transplant them. But when new varieties are to be bought and taken from a distance, October will be time enough to begin them; and if they are not finished until March they will take no hurt. There are few gardens of any note in the country where Rhododendrons are not grown, and as few in which real justice is done to the plants. They are so accommodating, that they will bloom, year after year, without care or trouble; and on the principle of letting well alone, they are allowed to overcrowd each other, and run wild, as it were, and by the time they get out of bounds, one-half of them are not fit to be seen on being released, and the best part of the other half must be cut down, and a season lost before they look like themselves again.

Within the last few years, growing the finer kinds of Rhododendrons received a great stimulus from the splendid collections of them sent by the great Bagshot growers for exhibition in London, first to a private place, then to the Botanic Society's garden at the Regent's Park, and last of all to the garden of the Horticultural Society at Chiswick, where, through some unfortunate mismanagement about the tents, they got to loggerheads about them, and so gave them up; and they might as well give up their right oars, for there is no feature at all the exhibitions which takes so well with the public; and you might as well think of taking the Lord Chancellor by the sleeve to a country dance, as to get hold of Mr. Waterer, or Mr. Standish, on one of their show days—they are so overwhelmed with ladies, and other great folks, talking about and pricing their beautiful plants. That very wet day, in June, I had the best luck I ever had, in finding these great growers resting on their oars, but dripping wet, under the great tent at "the Park;" and, wet as it was, we talked ourselves dry over the "fields and oceans" of beautiful Rhododendrons. It was quite a feast to me, who never saw such a sight before. I contrived to make some few notes, but I was not at all satisfied with them, and I waited till the July show, determining to book as much as I could; and then, only one of the parties, Mr. John Waterer, could find time to go round with me, and he was so pulled about by this or that customer, all the time, that I must claim the value of my notes myself, and if there is anything wrong in them I must also take the blame.

I have said already, that I likened some of the tall standard Rhododendrons to scarlet Nonsuch apple-trees, in ripe fruit, seen at a distance. Many of these standards are really magnificent specimens, and, I should think, from thirty to forty years old, judging from what Mr. Standish told me. He said he was only a young beginner, in comparison to Mr. Waterer, and could not show such standards for some years to come; and yet he has been growing them these fifteen years, and more. There is one kind, called *Roseum elegans*, and whether it is that it forms a standard faster and easier than others, or that people are fonder of it, I did not enquire, but I could see two of it to one of any other kind, all over, or rather under the tent. The original species, *Catawbiense*, was there in fine standards, and as low as 5s. to 7s. 6d. each; but the general run of prices is from a guinea to 12s., for good, handsome plants. There were many there, however, fully worth ten guineas a-piece; and, for a huge bush specimen, the finest and the best there, according to my fancy, is one called *Lady Eleanor Cathcart*. This has a clear rose-coloured flower, with brown spots at the bottom of the upper petals, and flowers in the middle of the Rhododendron season; the price of moderate-sized plants of it is 31s. 6d. One called *Waterer's Celebrandum* is the same price, and is the very best late crimson kind in cultivation, and is quite hardy. *Blendynium* and *The Grand Arab* are the two next-best crimsons; small plants of each

are charged 10s. 6d., and beautiful standards of *Blandynum* are from 42s. to 68s. *Erectum* and *The Duke of Norfolk* are two shades of rose of the first water; the first is 10s. 6d., and his Grace 21s. *Bravum* is in the same way, and nearly quite as good for 21s. A group of these fine high-coloured ones, planted in a recess on the lawn, and backed by a rising ground covered with evergreens, would be the richest thing one could plant or desire in the finest garden in England. Then, for cheaper plants of the same colour, but not quite so good, we have *Atrorubrum*, 7s. 6d.; *Cruentum*, 7s. 6d.; *Floribundum coccineum*, 2s. 6d.; and *Vestitum coccineum*, 21s. The best scarlet is *Soleil d'Austerlitz*, 21s.; *Towardianum*, 10s. 6d., a fine, large, rose-lilac; *Leopardii*, a still better lilac-rose, with crimson dots, 10s. 6d.; *Sherwoodianum*, 5s., in the same lilacy way, and a very profuse bloomer; and, last, in this tint, *Everestianum*, 3s. 6d., flowers in very large showy heads. The best purples are—*Purpurea elegans*, 3s. 6d.; *Curreanum*, 7s. 6d.; *Maculatum purpureum*, 5s.; and *Atrorubrum purpureum*, 5s. The two best whites are *Gloriosum*, 5s., and *Album elegans*, 3s. 6d. *Luciferum*, 5s. 6d., and *Perseicum*, 3s. 6d., are the next best whites, and, with Veitch's *Alba multiflora*, would be sufficient to dot over an acre of Rhododendrons. The following I noted as good, superior varieties:—*Blatteum*, 7s. 6d., shaded purple; *Bicolor*, 2s. 6d., rose, with a white eye; *Umbidum*, 3s. 6d., white; *Maculatum purpureum*, 5s., spotted and shaded purple; *Lady Anne Baird*, 21s., a beautiful rose; *Pictum*, 2s. 6d., a fine white, with yellowish spots; and *Victoria*, 5s., a purplish scarlet. All these are of the very best that were exhibited this season.

To make this paper more complete, I ought to give selections from *Ponticum* and *Maximum* for underwood, and other places; of the best dwarf ones of the breed of *Lahuricum*, for the outsides of clumps, beds, or borders; and also the best forcing ones of the *Catawbiense* and *Arboreum* breeds; but I must see all these in the best nurseries before I venture on a thoroughly useful list.

D. BEATON.

MUTUAL DEPENDENCE OF THE VARIOUS DEPARTMENTS OF GARDENING.

EVERY man is a centre of influence. He influences others, and is influenced by them in turn; and what is the most startling fact of all, that influence is not bounded by the present, but extends to all future ages and epochs. Let our young friends ponder the responsibility of their position.

If one thing more than another renders writing here a labour of love, it is the knowledge that so many young professional brethren are readers. I would wish them, in their studies, to avoid the contracted, and embrace the expanded. They have now opportunities for gaining knowledge, which we, in our early days, sighed in vain to obtain. If they use their opportunities, they may soon be a-head of their present instructors, but whilst they study gardening, they must neglect no light that a collateral science would yield. Every department of knowledge is merely a section of an harmonious unity. The more parts we are somewhat acquainted with, the more easily shall we comprehend the ins and outs of that to which our attention is specially directed. In these days, to approach to be a great gardener, a man must be a little philosopher. In his present social position, the gardener cannot be expected to be more; he will find it difficult to manage with less.

True, some of our staid supporters of society may cite poetry about "a little knowledge being a dangerous thing," and speak of smatterers in a way not the most alluring for youth. Honest men that they are! they wish to keep any little distinction they possess, not by

advancing, but by impeding others coming up to them. A conceited smatterer ever brings a mixture of contempt and pity in his train, but even a smattering, when joined to humility, and earnestness of purpose, will conjure up many make-shifts, savings of time, and savings of shoe leather; matters of no little moment, if a first-rate gardener told me the truth the other day, when he stated that double the amount of labour had to be gone through now, that would have been deemed almost impossible twenty years ago. Besides, as "Rome was not built in a day," so I have an idea that there was a period when the greatest philosopher must have been a very little one.

Our young friends, then, must not pay too much attention to the wise saws of these respectable stand-still gentlemen. "Let the cobbler stick to his last," is one of their favourite axioms; and so say I; if a man is content to be a mender of shoes, or, as Johnson would say, "a bungler" all his life;—in other words, if a gardener is to be nothing more than a digger and a hoer. Great cobblers there have been, and are; men who have done, and are doing much for humanity, but they managed to improve upon, or throw aside the old last. Arkwright might have been a tolerable barber, but if he had stuck to his razors, his shop, and his soap-box; and if Watts had never troubled himself about the lifting of the lid of the tea-kettle that supplied him with hot water; ages might have passed away before society possessed the advantages of the steam-vessel, the locomotive, the weaver's loom, and the spinning Jenny. If our knighted gardener, Sir Joseph Paxton, had confined himself to the mere routine of his duties, leaving builders to plan structures for plants to live in, is it likely that we should have had a Crystal Palace in Hyde Park, or the well-founded expectation of a more brilliant one at Sydenham, which the humblest gardener will be unable to visit without gaining some ideas for home practice?

Descending from such matters, we find the same principle in active operation in the various departments of gardening. Exclusive attention to one department will seldom insure great success there, unless there is a general knowledge of all the others. With that general knowledge, success ought to be greater than when the attention is greatly divided, or no benefit would flow from the division of labour. We thus possess the advantages of generalization of ideas and concentration of thought. This would not be the case did writers and readers confine themselves to their particular department, never going beyond them for an illustration, but rigidly standing "like tubs on their own bottom." Writers would sink into monotonous, the same-thing-over-again calendarists; readers would only peruse that which from the heading they thought would suit them, and thus lose most of the advantages and pleasures that gardening would yield to them. This applies chiefly to amateurs. To such, with leisure and intelligence at command, we must look for most of our improvements, and thus they will pay back, with interest, the debt they owe us for our practical details. Though not greatly trespassing across our departmental limits, these details will be interesting and useful, in proportion to the breadth of view with which they are developed. The man whose hobby is a greenhouse will thus find it his interest to know something about orchids, cabbages, and pine-apples. Just think of acting in a contracted spirit, and contemplate our friend, Mr. Beaton, wandering like an outcast confined to his flower-garden. Could he, or dared he have entered a plant-stove, and told, as he did so nicely last week, how the denizens usually associated with a brow-headed with perspiration might be seen in their glory in a sheltered, airy grass-plot out-of-doors? Would he have been allowed, without a struggle, to enter a greenhouse, turn it pretty well inside out, and, from some of its choice beauties, select material for such gar-

geous-coloured flower-beds as our fathers never dreamed of? How would your humble servant have fretted, like a trapped bird, if ~~now~~ up within the four walls of such a greenhouse—~~forbidden~~ to speak of the many uses to which such a house could be applied—told that he must keep his plants there for ever and aye, be they growing or standing still, in full gay feather, or in dishabille; resolutely denied the use of cold pit or hot pit by Messrs. Appleby and Errington, and warned by Messrs. Beaton and Hobson from trespassing on their grounds, for standing, plunging, or planting-out room.

These last matters have been frequently alluded to, but not more often than their importance demands. The huddling of greenhouse plants into shady corners in summer will soon be numbered with the things that were, especially among amateurs. I mention amateurs, as they are more likely to pride themselves in doing well whatever they attempt, and because this bedding system, and the continual sweeping and cleaning in large places, keeps many of the best gardeners always in a bustle, and always behind. We look at plants, day-by-day, our finger ends itching to shift them, to plunge them, or plant them out in an open or sheltered place; but day-by-day brings with it some more pressing necessity. Good plants, standing in north or shady borders, tossed and tumbled by winds, can scarcely be in a worse position. Every plant that will bear light should have its own share of it in summer, though it should never be taken from shelter to full exposure at once. When gradually exposed, plants even of the finest hard-wooded kinds do not suffer from the branches being exposed. The roots chiefly suffer from exposure—being burnt by the sun in the dog-days, and frosted in the cool damp nights of autumn. A soft, porous, damp pot is about as effectual for this latter purpose as a damp woollen stocking drawn over a bottle of water is useful for cooling the contents, by the evaporation of the moisture on the stocking when exposed to a hot atmosphere. Plunging all hard-wooded plants so as to secure perfect drainage and freedom from worms is of great moment. Plunging and planting-out soft-wooded plants, as Chrysanthemums, Salvias, Geraniums, Cinerarias, &c., furnish them with an equilibrium as respects heat and moisture, and guards them from sudden changes, while it greatly diminishes the necessary labour. "But why tell these things in the middle of August?" Better late than never: besides the end of this month, the whole of the next, and part of the succeeding, are of great importance for securing winter embellishment; and those plants that cannot be protected with glass will, if plunged or planted out, suffer less from extremes of all kinds than those standing in pots; that is, provided the water does not stand about the roots. The soil is more equal in its temperature, and higher in its average in autumn, than the atmosphere is, and greenhouse plants, warm at the roots, will resist, uninjured, a degree of cold in the branches which they could not endure with the pots crusted with ice at midnight. The luxuriance, and yet robustness of such plants, will bear no comparison with those coddled in pots in the usual way standing above ground.

While on this subject, I may mention being struck the other day with two rows, avenue fashion, of *Salvia fulgens*, and *S. splendens*, on the sides of a walk, grown as standards, with clean single stems several feet in height, and just coming into fine bloom. *Fulgens* does well with me in beds; *Splendens* was always a wreek the first rude wind that came, and this place catches it pretty well from every point of the compass. Standards of either, and especially of *Splendens*, would be out of the question with me. I have seen it in the neighbourhood of London a splendid bush, and a gorgeous blaze of scarlet on a lawn. I have, so far as I recollect, seen it pretty good in some of the sheltered nooks of Scotland. Those who are not visited with rough winds, and

sheltered and warm, I would advise, by all means, to grow this *Salvia* out-of-doors, both as bush and standard. In the same place, I saw a bed of *Erythrina Cristagalli*, that would keep an enthusiast dreaming for a month. The rain that had marred the beauty of everything else, seemed to have been charmed from touching it. R. Fish.

THE HOLLYHOCK.

(Continued from page 322.)

It is exceedingly interesting to watch the progress of a flower, or rather class of flowers, advancing year by year, and step by step, towards perfection. And it is a remarkable fact, that though we have been raising seed lings, and endeavouring by skill and ingenuity, we have never as yet attained in any one flower the acme of perfection. Whether the florist practices upon the Auricle, the Polyanthus, the Carnation, or the Pink, he still finds in his newest and best varieties something wanting, some property deficient, or over-done. This is the case with the Hollyhock more than with any other flower; hence the desirableness of persevering in raising new varieties still. We have no doubt, in a few years, there will be varieties as much surpassing the present generation, as those we possess now surpass such as we remember to have seen ten or fifteen years ago. All that is necessary is hybridising, and saving seed from the best-formed flowers. But, says the amateur, what are the points or properties that constitute the best varieties? We will endeavour to answer that question.

Characteristics.—The Hollyhock, is, as is well known, a tall-growing plant, but a good variety need not exceed from four feet to six feet; the foliage on the flower-stem should be of moderate size, or rather small. This property is to allow the flowers to be, when in flower, more exposed to view. Towards the top of the flower-stem there should be no foliage at all. On the stem, the flowers should be at such a distance that they do not crowd upon each other, but allow each bloom to expand fully. Each bloom should have the guard-petals perfectly flat and circular; they should project about half-an-inch beyond the central one, forming, as it were, a floral card to set them on. The stouter they are, the better they will then support the others, and they must be of the same colour. The central petals should be numerous and even, with as small hollows amongst them as possible; they should stand up boldly, quite as high as they are in diameter; the whole to form, as it were, a ball cut in two, with the flat side set upon the guard-petals. If a self, the colour should be full and bright; and if mottled, or striped, these variations should be in every flower, and on every petal alike, and the different colours separate and well defined. Then, lastly, for size. We fear this property is becoming too much favoured. Though a large flower is desirable, yet this quality may be pushed too far, till the flowers become coarse and vulgar, like the common peony. From four to five inches diameter will be quite large enough, measuring to the extremities of the guard-petals. We have seen flowers nearly six inches diameter, but we considered them anything but elegant or beautiful, as florists' flowers.

Such flowers, possessing the whole, or a greater part of the above properties, are the right ones to hybridise and save seed from; but such good kinds are not very free to produce seed, the flowers being often so double as to exclude the productive powers; hence it behoves the florist to watch those that do seed with all diligence, and the moment they are ripe to gather them, gradually dry, and put them by till the spring, in a place secure from damp and mice, for these little creatures are very fond of the seed. The seed is produced upon a flat receptacle, or pan, and previously to putting it by, it will

be advisable to separate the seed from its receptacle, because it is very apt to turn mouldy, and rot the seed.

Season for Sowing.—This choice seed should have choice care bestowed upon it, for every seed is valuable; if one or two are destroyed, it is quite possible that these might be the very ones that would have produced the finest flowers. Being so choice, it is not desirable to expose it to being sown in the open border or bed, for here, again, some of the best may perish. The best way is to sow the seed about the month of April, in wide, shallow pans, placed under a cold frame, upon a stratum of rough coal-ashes, at least two inches thick. Sow it on a soil formed of loam, three parts, leaf-mould, one part, with a due proportion of sand. Cover the seed about a quarter-of-an-inch thick, and see that there is no ingress for mice or slugs; the former will feed upon the seeds, and the latter upon the seed-leaves, so that what escapes the former will be destroyed by the latter. Water apply through the fine rose of a watering-pot, renewing the application whenever the soil becomes dry. Give plenty of air daily, or the plants in this young and feeble state will infallibly fog or damp off. The plants, when advanced two or three leaves, may be set out-of-doors in a sheltered nook or corner for a short time, to harden them off, and, in the meantime, a bed should be prepared to transplant them into. This bed should be well drained, and consist of good loam, enriched with a good portion of very well-decomposed dung. Dig it over at least twice, to incorporate the manure well with the soil; rake the surface over, and plant out your seedling hollyhocks at six inches apart every way. This will be space enough for them until the September following, when they should be planted out where they are to bloom. T. APPLEBY.

(To be continued.)

CONIFERÆ.

(Continued from page 275.)

CEDRUS AFRICANUS, syn. ELEGANS (The African, Mount Atlas, or Elegant Cedar).—This is, as its name imports, a truly elegant tree, with much of the appearance of the Cedar of Libanon, excepting that the branches are not so decidedly horizontal; and the leaves are much more silvery; hence it is sometimes popularly known as "The Silver Cedar." It grows to a considerable height, is quite hardy, and its wood is so hard and durable as to render it very valuable for various purposes.

C. DEODARA (The Deodar, or Indian Cedar).—In its native woods this most beautiful tree rises to the height of 120 feet, and must then make a truly handsome object, combining elegance with majesty. Even the Indians are sensible of the great beauty of this tree, for Bishop Heber says it is "a splendid tree, with gigantic arms, and narrow dark leaves, which is accounted sacred, and is chiefly seen in the neighbourhood of ancient Hindoo temples." We have, on a former occasion, eulogized the graceful beauty of this now well-known tree, we need not dwell upon it now, but will just notice that Dr. Falconer gives the dimensions of a fallen Deodar, which he saw on the Himalayas, as being 36 feet in circumference at the base, and 130 feet in length. He also says that the wood of this tree, taken from a Hindoo temple, supposed to have been built a thousand years ago, was apparently as sound as the day it was placed there, no insect being found in it. This is the more remarkable, because in that country insects abound and increase amazingly. Sir A. Burnes states, that the frames of houses are made on the Himalayas, and floated down the river Hydaspes or Schem to the Mysore; the durability and fragrance of the wood recommending it for building more than any other tree. On this river the Macedonians, he says, constructed their

fleet of the wood of this tree by which they navigated the Indus. Mr. Loudon, in his "Arboretum Britannicum," remarks, that the wood has a very clear, close grain, capable of receiving a high polish; so much so, indeed, that a table formed of the section of a trunk nearly four feet across, sent by Dr. Wallich to the late Mr. Lambert, has been compared to a slab of brown agate. Combining all these facts as to its beautiful and elegant appearance, its usefulness and great size as a timber tree, its power of resisting the attacks of insects, the high polish to which its wood may be brought by the labour of the cabinet-maker, and, lastly, its almost incorruptibility, this is surely a tree to be highly prized and most extensively planted, especially as it has been proved to be perfectly hardy; and, furthermore, as it has now become sufficiently cheap (1s. each) to be planted out as a forest-tree on our waste moors, intermixed with the Larch and the Scotch Fir to protect it from the blasts of autumn and winter, and draw it up so as in time to form such a tree as to approach the magnitudes alluded to above. By planting them thus thin, and filling up the space between each with nurse trees, a much less number of these trees would be required per acre. It is quite true, it would not thrive so quickly if planted in the manner that too many of our forest trees are done—that is, just a hole scratched, and the trees thrust in anyhow. The Deodar is worthy of a little care and attention at the first.—See our remarks on planting Conifers in a former number. The Deodar, like its equally valuable and interesting relative, the Araucaria, is well adapted to form avenues to a baronial residence, a temple, or in the centre of an arboretum. If the avenue was formed by a front row of Araucarias, and a back row of Deodars planted in the openings between the Araucarias, the effect would be surpassingly grand and imposing. The dark foliage of the Araucaria would contrast beautifully with the grey tint of the foliage of the Deodar; the latter would (in this country, at least) grow much quicker than the former; hence the spectator would imagine he was looking down a double avenue of two kinds of the most beautiful trees in the world, placed so as to show the beauties of each to the greatest advantage; and if each tree were examined in detail, the effect would be equally agreeable to the eye of taste. Let any one of our readers that have time and means, visit Elvaston Castle; there they may see what can be accomplished in the way of avenues with these two noble trees. It is true they will not see trees one hundred feet high; but, with a very little stretch of the imagination, they will be able to realise the effect such avenues will have fifty or a hundred years hence.

There are, it is said, several varieties of Deodar, respectively named *crassifolia*, *tenuifolia*, and *viridis*. We have also seen one much more drooping than the species; but none of these variations are, in our opinion, of sufficient importance (except as curiosities) to be cultivated largely. T. APPLEBY.

(To be continued.)

SOME WINTER CROPS.

SOME time ago, when we urged on our friends to occupy the ground then vacant, we suggested the propriety of their leaving, or arranging a well-sheltered border for *Winter Spinach*, and an open, yet dry, airy, plot for *Onions*; not but that the latter would like a warm corner too, but then such honoured situations must be kept for less hardy occupants.

As *Onions* stand the rigours of a moderate winter pretty well when the ground is not naturally too much saturated with moisture, a well-selected portion of the open square will do very well. In so arranging, we generally contrive to have such low crops as this at an

outside, it looks better than if it were bounded right and left with such things as Brussels Sprouts or Broccoli, and if an exhausting crop has been lately removed, then let some well-rotted dung be dug in, or, rather, that ought to have been done some time ago; but we are averse to sowing winter onions on rich ground, they are apt to get too gross, and consequently are less fit to stand a hard winter than when more wiry and firm, which they are more sure to be when stimulating manures are withheld. However, we will suppose the late crop to have been a heavy one, and dung necessary, then let that be buried pretty deep, in order that the roots may only reach it in spring, when all danger from it is past, and its utility will be more apparent. In regard to the kind sown, much difference of opinion exists, some insist on the *Silver-skinned*, others on the *Tripoli*, while we have had as much success with a kind resembling the *Strasburgh* as with either of the other two, and we find it equally hardy, and a much better onion for general purposes. The *Tripoli* is an ugly, deformed bulb, large, certainly, but that is poor compensation for the waste that attends it when cut up. The *Silver-skinned* is more generally useful; and where young ones are wanted to draw for salad purposes, this is the best of all, it being of a milder character than many others, and, as the name implies, it is, perhaps, whiter than many of them. In sowing, regard must be had to the purposes for which they are wanted; for if a considerable quantity be required to draw young during the autumn and winter, then sow broadcast in beds the usual width; but if only a few be so required, and the crops of next spring be of more consequence, then sow in rows a foot apart, but tolerably thick in the row, as a few are easily taken out in spring, and they transplant admirably, and do well, only they are somewhat later than those allowed to remain where sown. As the ground is generally dry at this season, we need not urge the propriety of not soddening it by treading on it when wet; but should the weather continue so dry as to render it necessary to administer water, let that be done in such a way as not to have occasion to tread again on the watered ground, and then let the whole be slightly covered with some shading material, as we have recommended for cabbage and other seed beds, which, however, remove when dull weather sets in for a day or two, or when the seed begins to vegetate. Nothing more will be required until they show themselves distinctly, when the hoe may be run through them, provided they be in rows; those sown broadcast must be kept clear of weeds, and when they are in thick patches a few may be removed at once, as they will only kill each other. It is a very good plan to work some charcoal ashes in ground sown with onions, as it acts both as a fertilizer and preservative; it is a very desirable ingredient to mix with the soil for this crop.

Spinach is also sown at this time much in a similar way to what we have detailed for onions, only it ought to be favoured with a more sheltered situation, as it is expected to continue in a growing state all the mild part of the winter, in order to furnish a supply of crisp, fresh, green leaves, when wanted. Now, though the plant can withstand a tolerable amount of severe weather, yet the purpose is not altogether served by its standing the winter, it ought to be kept growing as well; therefore, every available means must be made use of to attain that end. A south border, well sheltered from the east and west likewise, and the ground made as rich as possible. The conditions being just the reverse of the crop noted above, an opposite course must be adopted: the long-leaved or prickly *Spinach* is the best to sow now, but it need not be sown thick if the seed be expected to be good; still, it is safer to sow plenty, provided you can insure another necessary operation being attended to, that is, "thinning in

time;" not but that winter *Spinach* may stand much closer than the summer crop, but it is, nevertheless, advisable to thin it in part. As the crop is never expected to get very high, rows a foot apart, the same as for onions, will do very well. We have drilled it eighteen inches, but there is no advantage, unless the bulk of the spring crop be more important than the winter one: with us the latter has been the chief consideration.

If not done before, the principal *Onion* crop will now have to be housed; after having lain some time in the sun to harden, and dissipate the moisture calculated to induce a too early growth, they may be carried and laid down carefully on some cool, airy floor (boarded, by all means); there they can lie until some wet day they can be sorted, some of them tied up, and the others put away. In so putting them to rights, let it be distinctly understood that nothing has to be removed except a very little that may fall off, and the roots twisted off by hand—no knife used on any account. All partially unsound ones, and "thick necks" may be put aside for present use; but there is one description of *Onion* we would urge on our friends to appropriate to its legitimate purpose at once, that is, the pickling ones, which we suppose to be the small *Silver-skinned*; these, somehow or other, often start to grow soon after being housed, and, consequently, are spoiled for the purpose intended, therefore, when they are harvested, let them be at once secured in the pickle jar.

Shallots, being a much earlier bulb, will have been on their shelves some time ago, but they are ticklish things to keep in certain seasons and situations, often decaying almost wholesale. Perhaps the best remedy is an abundance of lime or chalk in the soil they grow in, but their propensity to "rot off" is so varied, as regards the position they grow in, and other things, that we cannot, with certainty, warrant any particular situation as likely to be free from disease. That disease, however, has nothing of the *Potato* complaint in it, as they often flourish, and ripen their bulbs, seemingly plump and sound; and after being stored away, decay takes place to a sad extent. We have, at times, had the same misfortune with *Potato Onions*, a kind which is produced by the increase of bulbs that are planted. We suppose that both cases are examples of that law which so often visits on the offspring of diseased parents the accumulated maladies of some three or four generations; an evil from which, however, seedlings are in a great measure exempt.

J. ROBSON.

ALLOTMENT FARMING.—SEPTEMBER.

POTATOES.—We grieve to find that the opinion offered in a previous Allotment paper has proved but too correct: virulent is the disease, indeed. There is, perhaps, one slight solacing phase in which to view the matter, and that is the fact that the virus does not spread with equal rapidity in the foliage as on its first appearance: at least, in these parts. But then it commenced earlier, and the *root gangrene* has proceeded with, at least, equal rapidity to its first visits. This, to be sure, may be principally owing to the unusual accumulation of ground heat, consequent on such a continuous run of heat as we seldom experience. Besides this, the atmosphere, for weeks, has been in a highly electrical condition; and there can be little doubt that this subtle agent, which pervades all nature, plays a most important part in the vegetable kingdom. These things together, we do think will account for the virulent character the disease has assumed; we see no reason to despair, but rather incentives to renewed perseverance in the care of the seed. We are not aware that anything of a novel character, as a cure of the potato, has appeared; the disease has hitherto proceeded in defiance of all the arts of man; preventives alone, if there be such, can only, in the present state of things, be relied on. As for those gentlemen who, from one quarter or other, constantly brag of their ability to bid the disease utter defiance, and advertise their wares as

being pure as the driven snow, we can only observe that they smell rather strong of the shop; and it is just possible that their wares may be as immaculate as themselves. But why not people look sharp after their own seed potatoes? Who, that depends on this staple commodity for the chief sustenance of his family, and in his own person enjoys a dish of floury potatoes; who, of that caste, we say, but can secure a little seed before it is corrupted? But, some will say, they are not ripe enough! Well, admitted, for mere argument's sake; but behold the dilemma—unripe seed or diseased seed!

There is an awkward impression abroad as to the ripeness of seed. The potato is said to be simply an underground stem. Now, who would refuse to propagate from a cutting of a stem, merely because a little unripe in the ordinary acceptance of that term? Or, who would prefer a ripe diseased shoot to a partially ripe sound one? Judging by analogy, this appears to be the true position of the question.

Early planting, removal from the soil the moment the black spot shows itself in the stems, and a speedy drying,—even greening slightly,—together with the lowest possible temperature afterwards, and a total avoidance of fermentation, are, we believe, the necessary storing precautions. The seed should be taken the moment any one tuber can be found with the rot commencing; and if they are very unripe, our advice is to bury them in layers, after laying to dry for a day or two, in a mixture of dusty soil, quick-lime, and charcoal dust, well blended, placing layers of the potatoes and compost alternately, for nearly a foot in depth, on the floor of a dry shed or outhouse. Here they may lay for a fortnight, or so, when they may be taken out and spread thinly to green, either in-doors or out, only they must be preserved perfectly dry. We have an upstairs room over the fruit-store, on the north side of the building, and here we keep our seed potatoes spread on the floor until November, when, if their room is required, we place them in a pit, putting layers of dry straw between the layers of potatoes; or, if the room is not required, they remain all the winter, which is the best plan, covering them through frosty weather, nearly a foot thick, with spoil of dry hay, or old litter. Thus managed, we rarely lose a potato; and in the spring, even as late as April, if any be left, they are as firm as when taken up, indeed, firmer, for they cut more like a sound carrot than a potato. Now, although we cannot boast like some of an entire freedom from the disease, we have it very light, as compared with many, but then we plant early, and take up early.

ROOT CROPS IN GENERAL.—But little cultural advice can be given as to these during this month; clearness is the main thing, both with regard to the present and succeeding crops. It has been a fire-some summer for weeds, but such seasons are by no means uncommon, and simply call for an increased degree of perseverance. It is rare that earnest labour goes unrewarded. If any allotment man or cottager is well-a-head with his work, and can spare time, he may dig down the centre, between root crops, with some advantage to the present crop, and a good deal to the succeeding one. The "bolters," or those mangold, carrots, &c., running to seed, must be pulled clear away from the rows, and used up; and any thinning which has been neglected, completed in the first week.

CARROTS.—In some places these will be grubbed; if so, we advise what we generally practice, and that is, to pull them immediately, and to cover the ground with greens, or some of the cabbageworts, or sow it with a very early turnip: the Dutch will do well. It is not commonly known, that grubbed carrots, when the tap-root is gone, only become as hard as sticks by remaining in the ground, under the false idea of their still growing. The fact is, that they are losing instead of gaining; and the dread of unripeness is the cause of many a carrot crop being all but lost. What else can become of them, the tops perishing until they flag? When, drawn in this way, they should be immediately cut into the quick, and buried in damp sand or soil. We dare say that a soaking in lime-water, or brine, for a dozen hours before pitting, would destroy the grub left in them; or, it may be, water at a temperature of 120°, for a quarter of an hour or so; indeed, the latter might be brine; we never tried it, but the thing is worth trial. These carrots will keep

until Christmas; and it is to be hoped every good cultivator will have a later and luckier bed to succeed them.

VACANT PLOTS.—In such perilous times with the potato, it seems almost a farce to talk of vacant ground. To those who have any, we say, lose not a minute—get in some of the cabbage-worts, or sow quick-bulbing turnips. Let all decaying crops, even those of a doubtful or suspicious character, give way to something more certain. If the party possesses no plants of the cabbage-wort tribes, let them at once throw in some early turnip seed, if only to keep the weeds down, although the latter is but a narrow policy. If such turnips are not wanted at home, perhaps some civil farming neighbour will exchange potatoes or corn for them: such may be made a mutual accommodation.

ONIONS.—We have long since given advice as to the early harvesting of this crop, in order to get another crop off the same land this autumn. We can do no better than quote our own practice, and amount of success this season. Onions sown in three four-foot beds, each bed fifty yards long, in the second week of March; ground trenched thirty inches in depth, bringing up three inches of subsoil; no manure used, being in good heart from former manurings. In May thinned by hand at twice; no hoeing; ground rolled, when dry, solid nearly as a turnpike road; the onion blades perfectly erect, until pressed down last week—scarcely a blade down with storms; the beds thrown up nearly a foot above the ordinary level. A finer crop was never grown, and that, too, on land which only a few years since seldom or never produced a crop, five seasons out of six being carried by the grub. We attribute this to the trenching up some subsoil, and to hard rolling; this, with the absence of the small hoe—hand-weeding being substituted—the onions bid defiance to storms, which, by throwing down the crop in an early stage of growth, do immense damage. The height of the beds ensures an early harvest: our onions will be off in four or five days (Aug. 17), and a crop of turnips sown in drills, without digging or manuring. Onions require careful drying; it is well to dry them in large baskets, carrying them in-doors every evening. Afterwards, also, they should be kept very dry; they succeed well in an upstairs room, where there is generally a fire beneath.

SEALLOTS keep best in a room with fire; we have seen them in excellent order, in March or April, suspended in a cabbage-net at one end of a warm kitchen, where they had hung all the winter. When we consider their native country, Palestine, there is no marvel in this.

WINTER GREENS: the Cabbage-worts, &c.—Again we refer to the severe visitation of the potato disease as an extra reason for securing plenty of useful greens, and high culture afterwards. Green kale may yet be planted; Savoys it is too late for; Coleworts, from a July sowing of early-hearting cabbages, may be planted in the first week, and if the soil is rich they will come in for Christmas. Those planted earlier will now require some culture, soiling them well up their stems. The young cabbage seed-beds, sown in the middle of August, must be clean weeded, and if the young plants look drawn, or sickly, some dry and loose earth may be strewn amongst them, an inch in depth. These young plants are much better pricked out, as gardeners term it, when about three inches in length.

GENERAL CLEANING AND BURNING.—The month of September offering, in our opinion, the best period in the whole year for making a general clearing of all plots, hedges, boundaries, &c., &c.; thus obtaining a lot of charred materials to carry out the cropping in the ensuing spring. The benefits derived from this ameliorator have been pointed out on all sides. Almost every cultivator of repute uses charcoal or charred materials. It is a capital improver on coarse soils, even as simply tending to correct the staple; but it has considerable chemical power; the power of giving out carbonic acid to the roots of plants. There is still another point in which to view the matter: soils, with frequent cropping, become what practical men term "worn out;" that is to say, they refuse to produce certain crops in their original perfection, and engender the club-root, fingers and toes, &c., amongst the cabbageworts, with failures amongst other things, which appear to the ordinary observer as unaccountable. Eminent materials impart a freshness to the soil which mere manures cannot accomplish; and it must, at least, be admitted, that such materials, after the ordeal it has passed,

is entirely free from insect enemies. Let, then, every hedge be cut, every ditch or other boundary be scoured, all coarse herbage, turf, and all from lane-sides or commons, be at once collected in a convenient spot, and charred. Let it not be understood that we are urging a trespass: we only mean collect all that may be lawfully done. The centre of such a heap may be the coarsest materials, reserving turfy soils, or weedy materials, to close up the heap when half-burnt. It may smoulder for a day or two, and the charred materials, wood-ash, &c., is best preserved dry in some outhouse. Thus all weeds will be destroyed, insects, &c., and a most valuable material provided for spring cropping.

AUTUMN CROPPING.—Little can be done this way: a raised bed, in a warm, dry, and sheltered situation, may be sowed in the first week with Bath Cos, Ady's Cos, and Hammersmith Lettuces, to stand the winter; it should be so placed as to receive a few hooped sticks to be covered with anything protective in hard weather. When the plants are well up a little charred dust may be strewed through their stems. Cabbages to stand where sown, thickly, may be sown at the same time. At the end of the month, or beginning of October, some of the Rhubarb intended for very early work may have the half-decayed leaves cut away, and receive a coating of littery dung nine inches deep, to shut in the ground-heat. This will produce nearly a month earlier than that untouched.

ONION SOWING.—Every one should provide a bed of autumn sown onions to transplant in the spring; they are both useful and profitable. We use the Deptford, and sow in the middle of August. Those who have omitted, may yet sow in a warm corner on a raised bed.

Pigs.—During the next six weeks is perhaps the best time in the whole year to get forward a good store pig; especially in seasons when potatoes are much damaged. To enlarge on the benefits of a good hog to the cottager is quite needless; everybody knows and admits, that cottage economy is incomplete without one, and in country places, the man who does not raise a pig is considered within a short and easy stage of the poorhouse.

Much, however, depends on the labourer's wife as to getting a well-fed pig: unless she takes a *pride in the affair*, all will be in vain. A good manager this way will do wonders. Every potato peeling, every cabbage leaf, every quart of house leavings, bacon water, &c., is turned to account—that is to say, made into bacon. In pig feeding there is no greater error than to throw much vegetable matter in a reckless way into the pig-sty. Even a hog can only do with a given quantity in a given time, and more only serves to get the pig in a saucy state—treading under foot and wasting much of the food. Whenever pigs are thus "tended," it is the result of idleness or apathy; it is too much trouble to attend to their wants frequently. It is astonishing how well-attended alternations of thin, swell, and coarse vegetable refuse will get a pig on; and if not thus handled, the meal bill will be that much higher. In finishing a pig off for the butcher, there is nothing better than peas—whole peas—given between meals. Where, however, this is practised, plenty of thin swill should be provided, for the peas will make them thirsty, and, indeed, are intended so to do. Added to this—a dry and clean bed. There is an old saying in these parts, that "a good bed is half meat," and very true it is. How well this traditional sort of practice meets modern and scientific views, as to the benefit of warmth to animals! We need do no more than point to it as a great fact. There is little occasion to bar the door against the rambling of hogs thus attended; they will be quite disposed to pass their time between eating, drinking, and sleeping. This is the way to make plenty of bacon in a little time.

Let us advise pig keepers to believe that cleanliness answers as well with swine as with any other animal. Cleanliness and warmth are almost twin brothers. And yet there is something more than even warmth in the argument. Everybody knows that the skin of animals performs important functions. When a pig rubs himself roughly against a post or tree, some extraneous matters require to be dislodged. Piggy's want of philosophy is supplied by that intuitive kind of knowledge called instinct. Stoppage of the pores of the skin produce itching; itching drives the pig to rubbing, having no hands; and rubbing removes the scales

of dirt, and the pores gain their liberty. Let every pig-sty, we say, be not only swept out, but *washed* down once a week, at least. R. BARRINGTON.

THE APIARIAN'S CALENDAR.—SEPTEMBER.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide."

THE BEE SEASON.—In this locality (Bury St. Edmunds) I am sorry to say the bee season has been a very bad one; indeed, unusually so. I have not myself obtained one really good glass of honey, nor have I heard of but one having been obtained by any other person, and the stocks, especially those that have swarmed, I fear, upon examination, will be found very deficient in store. Their attack upon the fruit, even so early as the cherries, was a pretty sure indication that little or nothing could be obtained by them from the usual sources, and they are now to be seen in large numbers both in the grocers' and confectioners' shops, where they die by hundreds in a day. This all tends to show that there is poverty at home, and that nothing can be obtained in the fields.

NORTH ASPECT.—The reports which I have received from persons who, at my recommendation, have placed their bees in a north aspect, are altogether in favour of it. The bees have worked more steadily, and swarmed quite as early, and the extremely hot weather at the beginning of July, which melted the combs, and even destroyed many newly-hived swarms that were placed in the south, did not at all affect them. One gentleman especially, in this neighbourhood, who at my suggestion removed all his bees to a north aspect, speaks of the advantages arising from it as very great indeed, and certainly he has obtained more honey, and of a finer quality, than any other person I have yet heard of this summer. Another writes to me, saying the advantages of a north aspect this summer have been immense. In winter we will know its advantages; the only doubtful period is the early spring, when a little sun induces the bees to leave their hives, but by a little good management any ill consequences likely to arise from it may be prevented.

STOCK HIVES.—It will be necessary to examine all the hives that are intended for stocks at the end of the month, and to make up by feeding each one that has less than eighteen or twenty pounds of honey to that weight, or to unite the bees to other stocks and take their honey. It will be found very troublesome, as well as expensive, to keep second, or even late prime swarms that are not made up to the above weight.

STANDS.—The end of the month will be a good time to examine the pedestals upon which the stocks are placed, for it is not unusual to hear of a stock being destroyed by the pedestal decaying just below the surface of the earth, so that by a strong wind, or anything accidentally going against it, it is broken, and the combs by the fall so misplaced as to render the stock of little or no value.

POULTRY OF THE CALAISIS AND THE ARDRESIS.

(Concluded from page 325.)

AMIDST all this under confusion of the different races of fowls, I have in vain looked out for any new or distinct breeds. Traces of almost all the recognised varieties are abundant, and present themselves in obstinately marked family characters;—Gold-pencilled Hamburgs, Chittreps, Cuckoos, Game Fowl, and even Runners, but not the least bit of novelty. The nearest approach to it are some hens, to be seen in various villages, of a peculiar colouring, which might be called Robin-red-breasts, and which look as if that feature might be made tolerably permanent, by careful breeding, if one could lay hands on exactly the right cock to suit them—for I have not seen this marking in any male bird. The tail, back, head, neck, and hackles, are pure white; the breast and fore-part of the belly, of a rusty red. This has a very droll effect; as when seen from behind, and when seen in front, they would hardly be taken to be the same birds.

The fowls of the Calaisis are undersized; for their

general appearance, imagine all the English breeds promiscuously bred on one establishment for the last fifty or a hundred years, and you have as clear an idea as it is possible to give of the inmates of a poultry-yard in the Pas-de-Calais. It is likely that the country has been repeatedly stocked from England. Some few game fowls look as if they had only come over the other day, so pure are they, though *combats des coqs* are strictly prohibited by the authorities, on the reasonable ground that they stir up strife among work-people, and induce them to spend money which they cannot afford to lose. The notion of cock-fighting amongst gentlemen does not seem to be a supposable hypothesis. But it may be guessed that some hundreds of years ago, when our nobles made summer trips across the water to break a lance with the Frenchmen, and feast with them during such intervals when they did not happen to be cutting each other's throats, many a page had in charge a few bags of cocks, to make sure of victory in one field, if it were lost in another.

The reverse of the fowls, the turkeys are very pure, of the true black Norfolk breed. If a reimportation were required, the Calaisais is the place to supply it. They are abundant and cheap, and are much employed to hatch other birds besides those of their own species. They also travel to England in large numbers at the approach of Christmas.

The ancient town of Ardres enjoys, from the top of its half-ruinous fortifications, a very varied and charming prospect. The chalky downs surmounted by the dismantled chapel of St. Louis, the forest of Lieques, and the forest of Guines, of which it is a continuation, embrace the famous field of the Cloth of Gold, now a fertile plain; the spot where stood Henry VIII's tent, or rather palace, is at this moment beautifully green with wheat. Swelling hills form an amphitheatre to the entire south and west. North and east is a large tract of marsh, partly belonging to the Calaisais, and stretching from St. Omer to the sea, formerly the estuary of the *Portus Itius*, but now silted up, and filled with turf and sediment. This tract consists of about half water and half dry land; that is to say, man has effected a sort of amicable arrangement between the elements, and, instead of a state of universal mud, there now exist, by virtue of the compromise, ditches, banks, canals, roads, ponds, meadows, streams, and garden-ground, reed beds and osier thickets. Herein are to be found multitudes of ducks, of two kinds,—one the quietest, the other the liveliest ducks in the world. The former are wooden ducks, stuck on little posts into the ponds, to attract the notice of passing wild fowl. The old song says, "A tailor's goose will never fly," nor swim either, it might have added; here are some ducks to match, in respect of incapacity. The latter are the celebrated call ducks, or *canards de rappel*, the most frisky, quacking things conceivable, which now and then, on propitious nights, have the pleasure of being tied by the leg amongst their wooden brethren, in order to invite strangers to come and be shot at, from the subterranean and subaqueous huts which the French marksmen put together with reeds and sticks, and which might be taken for dens of some beast of the country; but the more inartificial they are, the better they are found to answer their purpose. Colonel Hawker has admirably detailed this process of hut-shooting, and, therefore, I shall only observe that the huts are often so close together that it might be expected these fortresses would blow each other up into the air, or down into the water, unless they minded what they were about. But perhaps Monsieur A. may send his compliments to Monsieur B. to know if he be about to shoot this evening, in which case he will take the liberty of deferring his own sport till the day after. Several huts, however, may belong to the same *chasseur*, to be used, not simultaneously, but turn about, as wind and weather shall direct. Few other than call ducks are reared; they are of wild colouring, and mostly very pure and pretty. If the reader have a pond near his house, and wish to drive away some nervous, unpleasant inmate by incessant clack, squeaking, and every noise of which a duck's vocal organs are capable, he has only to import a couple of family parties from the Calaisais or the Andresis, turn them both into the same piece of water, and in a week his work will be done. Both wild and tame ducks are, during their seasons, sold here at about fifty sous, or two

shillings, the couple. Geese are not generally kept; everybody who can, tries to keep a cow, or a horse, or a donkey, or a goat, and the grass-eating birds would be somewhat in the way.

The immense number of fowls that swarm everywhere, receive very little attention, and are but rudely accommodated with hen-houses, &c.; but they are much under their owner's eye. The fine climate, and long summer which they enjoy may be one cause of their thriftiness. Caponising is generally practised.

It will surprise many, to be told that in this country, without hedge-rows, and small, scattered plantations, there is as much as is wanted of all game except pheasants; which are absent. The forests on the chalky hills are too dry for them, though there is abundant cover; but in spots bordering on the marshes they would do well, if preserved. Partridges are plentiful, and much cheaper than in England. The forests harbour hares and rabbits, which latter also frequent the sandy portions of the coast line. Snipes and woodcocks are a matter of course; occasionally there are large flocks of wild geese. The sportsman, who cares for other than pot luck, will find besides many interesting species which he rarely meets with at home. The variety of fish is immense; in addition to those usually found in still waters, including magnificent carp, which the French know how to cook, though we do not (the principal secret being to steep them a certain number of hours in a pickle of salt and vinegar, and other things), there are, within easy reach, trout streams; and, on the other hand, sea fish from the Channel and the North Sea. Dunkerque sends numerous vessels as far as Iceland, which stay out all summer, and return home laden with salt-fish, to be distributed during winter and spring throughout the neighbourhood. Last, and not least, capital brown shrimps a sou a pint. Even during the depth of winter, eggs are scarcely half the price they are with us; so that, egg-sauce, and shrimp-sauce are seldom beyond reach.

I have noted as natural phenomena in the Calaisais and Andresis—March 31, house martins, though sharp frosts at night; April 19, snow; April 20, the nightingale; April 22, cuckoo; April 23, redstart; May 7, turtle dove; May 15, a grand flight of cockchafers; May 16, quails calling. The two last facts may have occurred earlier. May 17, at night, the first thunder-storm of spring.

D.

WILD BEES.

By H. W. Newman, Esq.

"One of my boyhood's dearest loves wert thou,
Melodious rover of the summer bowers;
And never can I see, or hear thee now
Without a fond remembrance of the hours
When youth had gardened life for me with flowers.

"Thou bringest to my mind the white thorn berry,
The blooming heath, and foxglove of the fells;
And strange though it appear,
Methinks, in every hum of thine, I hear
A breeze-born tinkling from the sweet blue bells."

T. SMITH.

HUMBLE BEES.

Introduction to some new remarks on the "Bombinatrices."

ALTHOUGH there have been several publications on this branch of natural history, the writer still ventures to submit to the public the observations he has made on four species of "Humble Bees." Having spent the leisure hours of four or five summers of his youth in this pursuit, he begs to quote the words of a very intelligent writer on the same subject, the Rev. W. Kirby, author of the "Monographia Apum Angliæ." "Much still remains incomplete, and many errors will require future correction; an account of any genus, perfect and elaborate in all its parts, must be the work of him who is versed in the history and economy of every individual that belongs to it; so much knowledge with respect to every species and variety is not to be expected from one man; the naturalist should combine the discoveries of others with his own, and concentrate the whole." &c., &c.

The following pages contain the habits and history of four only (selected from nearly twenty) of the largest species that live in communities, and gather honey; they inhabit all

parts of England and the continent. The writer has been induced, in consequence of some omissions made in former histories, to supply them for the use of the naturalist who can condescend to spend time in the pursuit of such studies, and his object is mainly to describe the extraordinary habits of the drones, or males of all the four species of Bombinæ, which have come under his immediate notice and observation, and which have never been described by any former writer on the subject.

GENUS BOMBUS.

1st. *Apis lucorum*.

THIS is the most common and best known of the four species; it inhabits all parts of Great Britain and the Continent, but is more plentiful in the northern part of the kingdom than in the south; indeed, I have found, that in the southern and western counties, the nests do not contain so many inhabitants as even in the midland counties, probably owing to the scarcity or abundance of the wild flowers. The female may be seen in the spring, flying from flower to flower; she is much larger than the worker, and commences a nest by herself in the ground; sometimes she takes possession of some hole near, excavated by some reptile, but often it is made entirely by herself; in the latter case, her nest is not so apt to be destroyed by the field mouse, the most determined enemy to the wild bee. The queen and workers are so well known, that it is almost useless to describe them; but the male bee is very different, being of a bright buff colour, with a white abdomen, and is one of the most beautiful bees of the whole genus. These drones are very fond of the blossoms of the Salvia (puce-coloured), and the blue Veronica, a common 'spiral' flower, to be seen in almost every garden. Although the *Apis lucorum* appears the first in the spring, generally in the beginning of March, the males do not hatch or leave the nest until full a month later than some of the other species.

The whole species of *Apis lucorum* is subject to a disease from small lice, which fasten upon the head and trunk of the poor insect, and often eventually separate the trunk from the lower part of the body, and thus destroy the insect. It is a remarkable fact, that I have invariably found the queen, at spring time, more infested with these lice in the south, and south-west of England, than in Scotland, where my first acquaintance with their habits began.

I have read with much pleasure, Monsieur Reaumer's, and also Monsieur F. P. Huber's accounts of these insects, and very faithful ones they are, as far as they go. I cannot do better than copy a part of their history.

"This bee is well known in small woods and plantations, and makes its nest in holes in the ground. The females of this, as of all the other species, are largest in size, the males next, and the workers smallest. Early in spring, when the willows begin to appear in bloom, the female may be seen traversing the gardens by sunrise, with her usual sonorous booming, and busy in collecting honey and pollen from the catkins; the workers do not appear until a later period, and the drones not until late in the summer and autumn, when the thistles are in blossom, on the flowers of which they are found in great numbers. (The drones appear about the third week in July, or beginning of August, according to circumstances; if a hot summer, early; if wet, much later. I have noticed some as early as the 20th of July; and in 1847, I observed one three weeks earlier, June, 28th!!—H. W. N.) The females only, of all the former year's colony, have survived the winter, and now dispersing, each seeks a residence for herself, where she may become the foundress of a new community. Having pitched upon a convenient spot, the laborious insect proceeds first, to excavate the passage or gallery, then the nest itself, detaching the soil as it were, grain by grain. These excavations are situated often a foot under the surface. Having finished the excavation, and carpeted her new dwelling with soft leaves, &c., the insect proceeds to construct brood

cells; the wax of which these are formed is secreted as in the domestic bee, in certain receptacles placed on each side of the middle process of the abdominal scales, and is extracted by the bee in the form of laminae moulded to the shape of the insect's body; unlike the queen of the hive bee, the mother bee of this family possesses these wax-secreting organs, as well as the workers, and produces the substance in greater quantity than her progeny.

"The cells being prepared, the queen mother proceeds to lay her eggs, these are not fixed on one end, as with the hive bee, but are huddled together without any order; the mother guards the eggs carefully, as the workers (if any are hatched) are fond of destroying them the first eight or ten hours after they are laid; in four or five days, according to the temperature, the eggs are hatched. Males and females are bred in the same cell, and fed alike. (The meaning of this sentence is, that only one at a time is bred in the cell, but the second may be a male.—H. W. N.) The cells are frequently rent, but as often filled up by the workers. In fifteen days the bee arrives at its perfect state, its body is covered with down; it gnaws through the cell, assisted by its fellows, and in course of a quarter-of-an-hour, or half-an-hour, if the weather be fine, leaves its nest and goes into the fields in search of honey. The cell which it leaves is soon filled with honey. As the bees increase in number, the mother bee relaxes in her labours. The inmates of a humble bee's nest are of three classes—females, males, and workers; the old female is alone in the spring; in May, the eggs which she has laid have been hatched, and produce workers only; the females and males of the community do not appear till later, none sooner than June, and the greatest number in July. Like the hive drone, they have no sting; but they are exempted from the severe fate of the former, in escaping the cruel massacre to which those are doomed. The workers are not all neuters; many of them breed in spring, copulate with the males in June, and lay eggs soon after, but only those of males. (This I have never seen or discovered. I never saw the wild bees in coin, except about three or four times in forty years; these were about the end of August; and among the numerous nests which I have removed to my garden, containing many hundreds of bees, I never saw a couple together sooner than August.) These males fecundate those females which are reared towards the end of the season, but which do not begin to lay until the following spring, when they each lay the foundation of a new colony. At the approach of winter—that is, the first winter of their existence—the females, to the number of thirty or forty together, make a lodgement in or near the old nest, where they pass the torpid season in safety and quiet, until the return of spring awakes them to life and activity. The old mother, the males, and the workers, all perish before the cold season arrives." (Reaumer, and P. Huber.)

I will now notice a few particulars more; and the first is the labour of the queen mother at the commencement. As soon as she has formed two or three cells her labours are incessant, and I have watched her from the nest for the first fortnight. At this period she is seldom longer from the nest than from three to five minutes, no doubt to prevent the young brood-bee from getting chilled to death in its cell; only one bee is hatched at first, which immediately (after making great observations round) leaves the nest, and commences work. It is wonderful to see what observations a bee makes the first time it issues from the nest. It is about two minutes in particularly noticing the entrance, and all the objects near, returning many times before taking its final flight to work. The organ of locality, as phrenologists term it, is most strongly developed in all the genus of the Bombinæ. It is the same with wasps, hornets, and hive bees. The queen now remains at home a longer time, and when some half-a-dozen bees are hatched, her journeys are very rare indeed. I should here remark, that the proof of these labours of the mother bee are much more easily ascertained with the *Apis muscorum*, in consequence of their easiness of access in the moss; and it is to this species of bee I am indebted for my first notice of the gradual labours of the queen mother.

(To be continued.)

* The *Apis lucorum* is very similar in appearance to one of its congeners, the *Apis terrestris*. The former has its nest generally in small dryopen plantations in groves; the latter more in open fields, meadows, and pastures; and the male of the *terrestris* is the same colour as the worker. Their mode of nidification, and their choice of flowers and blossoms are precisely the same.

* The cells of the humble bee are never filled after being filled, like the hive bee, with honey.

THE CONTRAST.

WALKING the other day in one of our public gardens, where the beds were systematically arranged, and the plants scientifically labelled, I accosted a young workman, with a rake in his hand, and asked him if he knew the name of a plant standing a short distance off. "No, I do not." "Do you know the name of that one yonder?" pointing to another. He confessed himself still at a loss. "Why, my friend," I remarked, "if I worked here, with the opportunities there are for improvement, I would learn the name of every plant in the garden." "Oh," rejoined he, "I know enough for the work I have to do, and that's sufficient for me." Now this self-contentedness, or stoical philosophy (if philosophy it may be called), is not exactly the condition of mind to carry a man well through life, or to prosper him in his vocation. That workman evidently stood in his own light, or, rather, in his own darkness, and in the way of another who would have gladly embraced his neglected advantages. Improvement attends not the man who is content with ignorance. He had not learnt the art of lightening labour by taking an interest in it; he worked mechanically, but not mentally, and to work without either head or heart is drudgery. Profit is said to be like corn shown to a hungry horse—it excites to action; and to obtain higher wages, a man must qualify himself to receive them. Pay, without merit, is not the world's policy. But labour has other wages, which are too often overlooked—I mean those wages resulting not from eye-service but from a principle of duty, which, if a man performs heartily, he shall receive here and hereafter.

On the same day it was my privilege to visit another garden, where the plants were mixed in the flower borders, and unlabelled, but arranged with the view to effect and continuance of bloom. "Are you fond of flowers, sir?" said the gardener, after I had addressed him. "Very," I replied. "We are not on the bedding system here," he continued. "I like to have flowers all the year round, and though the design is not obvious, yet our borders are so planted, that take any given space, say from three to six feet, according to the habits of the plants, and you will see spring, summer, autumn, and winter orders alternately placed, that some flower may be always in bloom." "But this," I remarked, "requires skill, and a knowledge of the characters of plants, and some may occasionally come to hand of which you are ignorant." "True," said he, "but that is not often the case, and when they do I soon acquire their history." In truth, I found this man perfectly master of his art, and among the extensive variety of plants cultivated in the garden (and it was large) there was not one but what he was intimately acquainted with its name, order, and class. Gardening was his hobby, and the plants his pets. He had books, and was fond of collecting new plants, for they were the means of extending his knowledge. I could but contrast the difference between this man and the former, and reflect on the larger amount of happiness which the latter enjoyed; in the one case labour was unalleviated, in the other, pleasure sweetened toil.—S. P., *Rushmere*.

CONFINING BEES.

AN instance of the effects of confining bees, under circumstances somewhat similar to those related by B. B., has lately come under my observation. A very populous hive, which had not swarmed, requiring feeding in June, was inadvertently closed at the mouth. On being opened a few hours afterwards, in the evening, the bees rushed out, and a large cluster remained outside all night. Next day, about two hundred drones were brought out dead; no doubt they had been suffocated. Should any accident occur to a hive the poor drones are sure to be the first sufferers; they are as inferior in strength and endurance to the workers as the queen is superior. I assume B. B. did not see the drones *bullied*; but only carried away. Was a "Country Curate's" monster live pressed for food when its drones were killed, June 1st? It was extraordinary the drones should have been destroyed when there was a certainty of young queens coming on. We can scarcely regard the bees as such speculators as to calculate on the resources of neighbouring hives.

The observation of a correspondent, that the "working bees will not kill a queen," applies, as he remarks, to those reared in the same family. I have seen the queen of a weak hive, which became the spoil of plunderers, furiously struggling with five or six workers, but I came too late to the rescue, one of them had planted its sting in her breast. Introducing a stranger queen into the centre of a hive, she was instantly seized, imprisoned, and smothered; the process occupied five hours. When at length she fell, the bees, missing her, surrounded and imprisoned their own queen in an impenetrable mass, from which she did not emerge till the intruder was carried dead out of the hive.

Would your correspondents recommend feeding with barley-sugar as available for cottagers, or when extensive feeding is requisite? I have supplied an apiary by the stone, without any risk of the bees being bedaubed, using honey, or the syrup, according to Mr. Holding's recipe in "The Shilling Bee-Book," and putting it into combs as he advises, or, in the case of a cottage hive, having a small wooden bowl, with a tube through it three inches long and three-quarters of an inch in diameter, the end of the tube being fixed into the hole at the top of the hive, and covering the syrup with a float of cork. All that is necessary is to give the syrup sparingly till the bees are accustomed to it, and a taste of honey at the first will invite them. Such a bowl costs fourpence; the tube could be put in for a trifle, and I have had the bees in the bowl by hundreds, enjoying all the advantages of "top feeding."—INVESTIGATOR.

[Having expressed doubts as to the working bees employing their stings as a weapon in destroying their queen, we received the following note from "Investigator":—"When I had separated the workers from the queen, I found a sting left in her breast. She exhibited the usual effects of the venom in a few minutes, becoming paralysed in the limbs. Huber relates an instance in some respects similar, but supposes the queen was stung by accident. I presume to differ on this point with the illustrious naturalist. Dr. Bevan relates an instance of a worker being stung by a queen. There is no doubt the workers destroy each other in this way; I have frequently observed it. Having placed a dish, on which there had been honey, near the apiary, it attracted bees from all the hives, and became the arena of a battle-field, where the combats were more than commonly furious. One bee had a sting left in the thorax between the wings, and died on the spot; two others, mutually vindictive, hooked the barbs of the two stings together, and thus remained prisoners. In the contentions which are seen at the mouth of the hive, it appears only those acting on self-defence employ their weapons; the intruders attempt to escape, sometimes being held prisoners till they deliver up the stolen property."]

POLAND VERSUS HAMBURG FOWL.

THE Pole fowl counts three varieties, the Black, with white tuft; the White, with black; and the Spangled (properly so called). The true-bred Pole may be known by the total absence of comb, a thickened lump of skin on the top of the head, from which springs a large tuft or crest of feathers, so large, indeed, as almost to blind the best birds; the beak is raised into a knob over the nostrils, different to any other breed; they are often muffed or bearded, in which case their wattles or gills are wanting, or very small; their feet are of a slaty lead colour, the nails and soles of the feet white, and of a large size, though some very pure bred birds will be found small on account of their being bred too much in-cand-in, which also causes them to be delicate, otherwise I consider them as hardy as other poultry, and excellent layers, rarely wanting to sit. It seems to me a great pity they should be so scarce, as they are really a very handsome as well as productive variety of fowl.

The colour of the Black variety should be of a beautiful raven black, changing in different lights to purple or green, with the crest quite white; occasionally the cocks of this breed show a little white at the lower ends of the quill feathers of the tail, which, though it disfigures the bird, is not, I believe, considered any mark of bad breeding. The chickens, when hatched, show the tufts from the first; they are black, with white tufts and white breasts.

The White variety have just the reverse of plumage, the body being of a snowy white and the crest black. They are almost extinct with us, but I have heard are plentiful in Egypt. I have never seen but four specimens, the last, a very old hen, at St. Omer.

The Spangled are divided into two sub-varieties, termed Golden Silver; the golden being a reddish-brown, and the silver a creamy-white; either of these mixed with black constitutes the ground colour, all the feathers being tipped with white, whence the term Spangled. (Since, however, they have become so very scarce, many other fowls, of quite different markings, have, improperly I consider, been called Spangles.)

Poles, from what information I can gain, appear to have been brought by the Spaniards from the East, by them taken into the Netherlands, and thence we have received them. Real good Poles are very scarce; dealers, through ignorance or otherwise, continually selling Hamburgs or mongrels for the pure breed, and prizes are sometimes given for birds as Poles which I should call Hamburgs, a description of which is necessary to guard persons against deception.

Hamburgs come from Germany, many coming direct from Hamburg, from which circumstance they derive their name. They are tufted like the Pole, but the tuft is smaller, does not come so forward, and, consequently, leaves the eyes more exposed, and is fringed by a small comb of curious shape, generally consisting of a very small double comb, terminating in two sprouts or horns; they are destitute of the white spangles and white in the tuft; their colour is gold or silver, pheasant, that is, the feathers of gold or silver are edged with a glossy black, resembling the breast feathers of a cock pheasant, and giving the bird a dotted or scaly appearance; they are also sometimes mottled, and are considered good layers. In my opinion they owe their origin to a cross between the Pole and the Dutch Every-day-layer, though some say they can't, or, perhaps, won't, see any difference.

These, and innumerable crosses between them and Poles, are plentiful, and are generally sold as Poles. I hope I have said sufficient to make it plain to those willing to learn, that there is a difference, and unless Pole fanciers are more particular, I fear Poles will become quite extinct before long, which is much to be regretted, as Poles are not only a beautiful variety, but first-rate layers, and excellent for the table. If agreeable, I will describe the Dutch Every-day-layer in a future time.—B. P. LIXENT, *Rose Cottage, Beccles Green, Sevenoaks.*

[We shall be obliged by any additional communication.—ED. C. G.]

MASON'S HYGROMETER.

At page 233, of the present volume, I notice, that in answer to a correspondent, you say, "we cannot learn anything about Mason's Hygrometer." Allow me to inform you that it is founded on the principle of ascertaining the amount of vapour in the air, by noticing the degree of cold produced by evaporation. The method was first devised by Dr. Hutton. What title it has to be called "Mason's Hygrometer" I know not. It is a method of hygrometry that has been recently adopted by all meteorologists, and is usually designated by them as the "Wet and Dry Bulb." The instrument consists of two sensitive thermometers placed side by side; round the bulb of one a piece of fine muslin is tied with lamp cotton, and the ends of the cotton allowed to hang in a small vessel of water, which is suspended near them; the muslin is thus kept wet by capillary attraction; and the degree of cold being observed, which is called the temperature of evaporation, and compared with the temperature of the air, which is indicated by the dry bulb thermometer, the degree of humidity, the dew point, &c., are found by means of tables constructed for that purpose. These tables are to be had for half-a-crown, together with a description of the use of the wet and dry bulb thermometer, at Taylor's, Red Lion Court, Fleet street; they are compiled by James Glaisher, Esq., Meteorological Observer at Greenwich.

The rationale of the instrument is best understood in

this way. If we consider what would take place when the air is saturated with moisture—in this case the dry bulb thermometer would indicate exactly the same as that covered with the wet muslin. This state of things is often observed in a fog, or at night; but as the air becomes less moist, it will be easily conceived that the dry bulb thermometer will rise above the other—thus showing how far the air falls short of complete moist saturation. Tables are necessary to ascertain the exact amount of vapour in the air, because the capacity of the air for moisture varies with its temperature; but let no reader be dismayed at the idea of tables, they are no more formidable than the columns of a ready reckoner, which are just what the said tables are in hygrometry instead of £ s. d.

The instruments that are sold by the best makers for accurate meteorological observations are expensive; but, as I think, in these days, no one who pretends to scientific gardening ought to be without the means of telling, by some surer indicator than his bodily feelings, the state of the air which his plants enjoy (or suffer), I shall state, as briefly as I can, how this kind of hygrometer can be made at a moderate expense.

As every greenhouse, or place for plants, has one thermometer already, the extra expense incurred, in order to have this useful instrument, is only that of another thermometer. The companion thermometers should correspond as accurately as possible in different parts of the scale, and should be selected on this principle. The comparison will be best effected by placing them in water about 90° Fahrenheit, and allowing them to remain in the water whilst it gradually cools. It will be easily ascertained then, out of a number, which pairs are the fittest associates. The ordinary thermometer with the box-wood scale must then be prepared, by cutting off so much at the bottom of the scale as will allow the bulb to project beyond it at least half-an-inch. The tubes, of course, must be taken out whilst the operation is performed: let the two then be fastened side by side to a small board, about three inches apart; the lower edge of the board should not come below the scales. It is essential to accuracy that the bulbs should be left thus free, on all sides, to the air, and to protect the thermometer from breaking, let the board be fixed in a frame which should reach at least three inches below the bulbs. The frame should be not less than two inches deep from back to front, and the thermometers, on their board, should be fixed half way between the back and front. One of the thermometers may then be prepared by tying a piece of muslin neatly round its bulb with a thread of lamp cotton, and the ends of the bottom dipped in a small glass suspended from the side of the frame; the surface of the water in the glass should be about even with the bulb, or a little below it. If above it, the bulb will be flooded, and the result of the observation will be false. The muslin should be just so wet as to moisten the finger when applied to it. The cotton will act better if previously soaked in a solution of soda.

I wish I could persuade all gardeners to set to work with these instruments; they are nearly all-but necessary for the regulation of greenhouses and hothouses, and out-of-doors. I feel sure that many striking and useful truths might be recorded of the varying degrees of humidity of the air, in contact with different soils, at the different seasons. Every gardener is something of a meteorologist per force, and I would have him an intelligent one, not trusting to the indications of his bodily feelings, but those of scientific instruments, many of which are now so cheap as to be within reach of almost every one; and very large proprietors might well insist on a register of meteorological phenomena being kept, which, in due time, might become of great value to science.—SIOGA.

ON CLASS FORTY AT THE BIRMINGHAM POULTRY SHOW.

CLASS 40, at the Birmingham and Midland Counties Exhibition of Poultry in 1851 (Class 40 of 1852), will be remembered by lovers of rare and curious specimens, as offering prizes (the catalogue having previously enumerated all well-known sorts) "for any other distinct variety." It is to be

hoped that many owners of fowls which are little known will remember the existence of this class, and will, when the occurrence or recurrence of exhibitions shall offer the opportunity, favor fellow-amateurs and others with a sight of their rarities.

There are, doubtless, many handsome and profitable kinds of poultry in different parts of the world which are almost unknown and unnoticed in England. In America, I am told, there are good and beautiful kinds; in Russia, there are some which are so much valued there, that it is almost impossible for strangers to obtain them; and in Turkey, the *Cochin-China* were known and highly prized while still strangers here, having passed into that country by way of Asia. A few years back, while the *Cochin-China* fowls were yet unknown to me, and after I had met with only disappointment in an endeavour to discover in the Spanish the good qualities often attributed to them, I was told of some fowls to be found in Turkey, possessing size and other good qualities in great perfection, and I, of course, became immediately very anxious to buy some of these rare birds. Several of our friends, at that time living in Constantinople, and their friends, kindly placed themselves in full pursuit of these wonderful fowls, but without success, and we were, after some time, obliged to give up the idea of having them. Last year, one of our Constantinople friends came to London to see our Exhibition, and on his return, I sent by him a *Cochin-China* cockerel and two pullets, as a present to his father. During the voyage, many persons from the different ports came on board to see these wonderfully large fowls with a strange, unearthly crow, and on the arrival of the ship at Constantinople, it was found that these were the very same fowls which I had been so anxious to obtain from Turkey; which had, however, become very scarce there, and which, if ever sold at all, were only to be purchased for an enormous price. As another proof of the productiveness of the *Cochin-China* fowls (if, now that they are so well known, another proof can be needful), I must mention that these pullets continued to lay eggs throughout the voyage, in spite of weather so tempestuous that it was difficult for the captain to save them from being drowned in their coop.

About eight years ago, a young sailor, who had served in our family before he went to sea, brought me a fowl from the Cape of Good Hope, of a kind which I have never seen since. He (for it was a cock bird) was entirely jet black, with long scarlet wattles, and a very full rose comb; the shape of his head and his neck were Malay-like, and his tail drooping. He was very upright in carriage, and so tall that he looked tall by the side of a fine Spanish cock. He was certainly very handsome; of his other good qualities I had little opportunity of judging, for very soon after I had him, he and his rival, the Spanish cock, got together and fought, although we had fancied them securely separated, and both ultimately died from the injuries which they then received. I never but once saw a bird like him, and that I have always thought must have been brought over at the same time; for the same sailor had two cocks with him in that voyage. This second bird, I saw exhibited at a poultry exhibition, in the Zoological Gardens, Regent's Park: he was mated with hens very unlike himself, and the coop was labelled "Crow birds."

The curiously-shaped, and, I think, curiously ugly *Rumpless* fowl is shown in this fortieth class of the Birmingham Show; with regard to the ugliness, however, one opinion is no rule, for I, who think the *Cochin-Chinas* very pretty, have heard them pronounced "curiously ugly," because, poor things, they have no tails, and I should be sorry to depreciate anyones favourites. The *Rumpkin*, *rumpless*, or *tailless* fowls are little known, and to be met with but rarely; they are said, by some who have tried them, to be good layers, good mothers, and good birds for the table. The entire absence of tail gives a curious shortness to their form, they have an upright gait and a somewhat heavy look about the head; those which I have seen have been dark in color and with rose combs. Richardson gives but an indifferent character of these birds, and one rather at variance with the above, for he says they neither possess good flesh nor afford good eggs.

The equally curious, and, I believe, equally unpopular, *SNK* fowl is also shown in this class. It is rather larger than the bantam; the plumage, from the texture of which

it is named, is more like silky hair than feathers; in color it is white or cream color, and it has a rose comb of a somewhat dusky color. The egg is white, and as small as that of the bantam.

Many other sorts take their station here. The *Frizzled*, or frightened hen, with her fantastic appearance: the splendidly-plumaged, elegantly-formed, *Jungle cock*—so difficult to mate: the *Spangled Spanish*, which I know I have wrongly named, and which should by rights take place among its countrymen—the Spanish: the long-known, long-familiar, *Cuckoo fowl*, and fowls from many English counties, some of which may be as deserving of notice as the better known and much admired *Working*. ANSTER BETTER

THE DOMESTIC PIGEON.

(Continued from page 280.)

THE INCONVENIENCES OF NOT ALLOWING PIGEONS TO REAR THEIR YOUNG.—The reader has seen in what manner pigeons disgorge into the beak of their young ones a kind of pap, which has a great analogy with the milk of quadrupeds. If we deprive a quadruped of its young as soon as these are born, the milk, not finding its natural passage, causes such disorder there that is frequently followed by very serious consequences. If we deprive pigeons of their young, the liquid pap which they should give them, not finding any issue, causes such disorder that it is quickly followed by death, unless an immediate remedy is resorted to. Generally, when pigeons cannot feed their young, either from their having set on clear eggs, or their young ones having died in the shell, or been taken from them soon after their birth, we soon perceive the symptoms of this complaint, by their constrained and singular movements, plainly indicating uneasiness in every part of their body. Indigestions immediately follow, then a cutaneous eruption suddenly covers the whole skin with a kind of itch or scab, which is improperly called *the leprosy*. Sometimes this eruption is not general, but comes out in different parts, and forms deposits very dangerous, and frequently incurable. These deposits first appear in the shape of small, round tumours, enclosing a yellowish matterly liquid; the tumour increases rapidly, and sometimes becomes as large as a small nut. The humour it encloses hardens, and has the consistency and appearance of the yolk of a hard-boiled egg, and implants itself in the muscles as if it had taken root there: the disease quickly increases, the animal lingers some time, and dies if not operated upon. If the deposits are inward, every assistance is useless. There are two ways of treatment existing to cure this complaint; the first is always the best, because it at once arrests the progress. It consists in giving the pigeons that have no brood a young strange pigeon to feed. This substitution must be made cautiously in the night, during their sleep; for if they perceive it, very possibly, instead of taking care of it, and bringing it up, they throw it out of the nest after having killed it. This generally happens when they have two given them, therefore, we must take the precaution of only giving them one; first, for this reason, and secondly, not to run the risk of the pair from which the young are taken being attacked with the same disease we would cure in the others. It is not always indispensable to give them a young one born the same day that their incubation should have finished; it might be one or two days older, as that would have no influence on their way of receiving it. If we have no young pigeons for them to adopt, it will be necessary to try another treatment. We must take them from the dovecote, and place them in a separate apartment, or breeding cage. There we must condemn them to a rigorous diet; to be continued as long as we can feel with the finger a hard substance, or swelling at the bottom of their throat, occasioned by the inflammation and tumefaction of the lacteal glands. During this time of abstinence, we must give them water to drink, with a few drops of vinegar in it. If the disease has made progress, and the deposit appears in the shape of a tumour, we should open it with a sharp instrument, extract the matter, and burn the surface of the wound with caustic. Some persons content themselves by eating it off with salt; but this is a much slower method, and the

bird suffers more. It sometimes happens that the young pigeons die at the expiration of a few days; in this case, the parents are still liable to this complaint. The amateur must watch them then with as much care as if they had nourished them for a shorter time.

(To be continued.)

DOMESTIC PIGEONS.

TWENTY-FOURTH RACE.

SWISS PIGEON (*Columba Helvetia*).—It is about the size of the Stockdove, and as light; its beak is thin; it has no prominent round the eyes; the plumage is generally streaked with red, blue, or yellow, on a white ground; it frequently has one or two rings, and a breastpiece of a brown-rod, and two ribbons on the wings, the same colour as the breastpiece. Pure specimens are become very rare, because it has been blended with the Carriers and Tumblers. It is only by means of art and patience that we have been able to recover them by crossing different varieties among themselves, or with Mixtures of a rich colour. The common Swiss pigeon, and the One-coloured Swiss pigeon only differ from the English Tumbler in having a much longer beak and no streaks on their plumage.

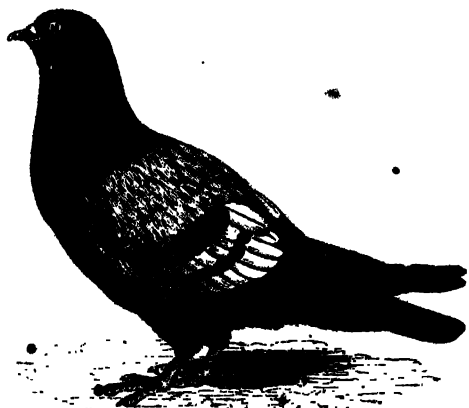
COMMON SWISS PIGEON (*Columba Helvetia vulgaris*).—The eye with a golden iris; the plumage partaking of all the colours mentioned above; a necklace and breastpiece of a brownish-red; wings barred, not streaked, and the same colour as the body.

ONE-COLOURED SWISS PIGEON (*Columba Helvetia unicolor*).—This has no necklace or breastpiece; it is slate-coloured, and the whole body is of the same colour.

GOLDEN-COLLARED SWISS PIGEON (*Columba Helvetia torquata inaurata*).—These beautiful birds have a bluish head; the neck and breast of a brilliant metallic yellow; the back inclined to yellow, but spotted with grey; the wing and tail bluish.

ORANGE-STREAKED SWISS PIGEON (*Columba Helvetia lineata aurea*).—The eye with a black iris; back and neck of a clear blue; breast of a reddish-brown; two orange-coloured bars extending like a ribbon across the wings, the bottoms of which are white. It is very productive.

GOLDEN-SPOTTED SWISS PIGEON (*Columba Helvetia radi-*



aurata).—The plumage is blue; the flight and tail of a blackish-blue. There are some inclined to yellow, and have the breast twice gilt, or else they have the back of a light mahogany colour, and the breast of a golden brown, with a slight breastpiece more clear. Others have the back of a dull mahogany colour; the neck and breast of a beautiful changeable colour, approaching, says M. Vieillot, a plum colour or violet-brown.

WHITE-MARbled SWISS PIGEON (*Columba Helvetia alba mustellata*).—This breed, which is more rare and handsome than the preceding, differs from it in its cloak, and the upper part of its wings, which are inclined to white, with brown marblings, which does not produce a more agreeable effect.

BLUE SWISS PIGEON (*Columba Helvetia caruleata*).—This

very much resembles the One-coloured Swiss, but it is slate-coloured, inclining much more to blue. It frequently has two ribbons on its wings, the same shade as the necklace and breastpiece. These five last varieties are the most brilliant in colour that can be found in all the vast tribe of pigeons.

(To be continued.)

HOLLYHOCK SEED.

I WOULD offer, for the benefit of the purchasers, as a useful hint to those parties who save Hollyhock seed for sale, not to mix the seeds of the different sorts. How are parties to plant out their seedlings with any degree of taste when they are so mixed? By being mixed, perhaps, just where you want a variety of colour, there you may have three or four of the same tint. Let the seedsmen put the different sorts in different packets, and mark them with their true names. We shall then not only see that we have been treated fairly, but avoid a great amount of ignorance when we are asked their names, and do not know them.—S. DAY.

[It is] desirable that the seeds saved from varieties of the same colour should be kept by themselves, because the chances are that the colour of the parent will prevail in the seedlings raised from it. Our correspondent, however, must be aware that cross impregnations, and the sporting habit of the flower, will forbid any certainty being attained as to the colour that will appear in the seedling flowers.—ED. C. G.]

DORKINGS—PREFERENCE OF VARIETIES.

THE intelligent correspondence of Mr. Wingfield, and "Gallus," has much interested me. In reply to the query of "Gallus," I beg to state, that although my Dorking fowls are highly bred, and handsome birds of their class, they have not been "bred in and in," and yet this year, three-fourths of the progeny are deficient of the fifth claw. Some of the birds had six claws on one foot, and four on the other; many had only four claws on each foot; but still more had five claws on one foot, and four on the other.

With respect to the controversy, as to which is the more profitable breed, I think it mainly depends on two circumstances.

First. As to the quality of the special kind kept. And Secondly. As to whether eggs or chickens are in greatest demand in the neighbourhood in which the poultry-keeper resides. Thus, in my own case, the Dorking fowls lay very much larger eggs than the Spanish fowl; the Dorking eggs weighing upwards of three ounces, the Spanish not more than 2½ ounces, and frequently not so heavy; and as this is not a general law, I infer that the Spanish are of inferior character, although possessing the external characteristics of their breed in perfection—such as very white faces, large, deeply-indented combs, and plumage of raven blackness. The Dorkings are first rate birds of their class, weighing as much as many Cochins-Chinas.

The Spanish have laid eggs daily, since January last, without wanting to sit; on the other hand, the Dorking chickens grow rapidly, are soon ready for the table, and when there, outvie the whole race of Cochins, Malays, Spanish, Poland, or any other breed.

Individually, I am simply an amateur of poultry, having in separate yards, at this moment, Game, Spanish, Dorking, Silver-spangled Hamburgs, and black Bantams; but I do not hesitate to declare, that for purposes of general profit to the farmer, the brown-speckled Dorking, is, as yet, unapproachable.

I trust, however, that this assertion will be leniently dealt with by your able correspondent, Anster Bonn; if otherwise, so be it, for I cannot but think that your friend "Thomas," truthfully represented the "Cochins," when he said—"They eat too much, lay too small eggs; . . . and folk don't like eating these fowls; they say they are like parrots." Another great defect, in this climate, is, that they are so long without feathers; for the first ten or twelve weeks of their existence they make one shiver, from the combined effect of their ugliness and destitution.—J. FITCHMAN, M.D., Mickleover, near Derby.

TO CORRESPONDENTS.

* * We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of the Cottage Gardener, 2, Amen Corner, Paternoster Row, London."

SPUR-PRUNING (A. C.—, Devon).—Mr. Errington will in due time say more about spur-pruning; at present other matters of equal import press. The original spur shoots will remain permanently for many years, and will enlarge into huge excrescences, resembling an old chair stool, after a few years. Judicious stopping will not cause the embryo buds to start; injudicious stopping sometimes does so. Pray study our papers; you will find we have written guardedly. Why do you not introduce those planted last winter, to ripen their wood? White Muscadine, Black Prince, and Black Hambro', would do out here Devon climate. Black Prince is a good house grape, so is White Frontignan. Especially we have not grown, but it is spoken pretty well of. Overbearing will ruin any vines, if persisted in. You will see in back Nos. how to treat them; it is not simply a question of vigour, but rather of glass surface; in other words, of light.

BEES.—H. B. writes thus:—"I will now proceed to give you further information relative to stock No. 3. On the 17th day from its swarming a few drones were perceived, as if the wholesale slaughter, to which I before alluded, had been stayed by the presumed requirement of the case, for on the 20th day blackness was heard, and on the 21st the young queen was thrown out. Stock No. 3, I treated similarly; it swarmed on the 13th day, and on the 18th the young queen was thrown out. Stock No. 2 and 13, have not proceeded so satisfactorily. Concluding the bees had become lazy, for they do seem to have fits of indolence, I turned them up on the 20th July, about six weeks from their swarming, and took from each about 4 lbs. of comb; neither of them contained many bees, and no brood could be discovered, and perceiving, on the 5th of August, that No. 13 did not work, I took it up, but did not find a particle of honey or brood, and no queen; the half-pound of bees I gave to No. 2. How do you account for the ill-success of the plan in these two instances? Do you not think the shortness of drones—several of my hives besides these four began to kill their drones early in June—in the apiary, may have been the cause, as it seems evident the queens had not begun to breed. I shall be curious to know the result of No. 2, and shall be obliged by your informing me how to proceed. I ought to remark, that at the time of my depriving No. 2 and 13, some drones were found in each, but may not have been out of the hive, and, therefore, useless to the queen. No. 13 gave me, 19th of June, a swarm of 4½ lbs. No. 2 gave me, 3rd of July, a swarm of 4 lbs. Last year it was suggested that your bee-keeping correspondents should send particulars of the honey taken from stocks, and swarms, and upon what system procured. I trust you will call upon them for such, and if some kind of register was kept, an idea may be formed of the goodness or otherwise of the seasons. I have heard persons call this a good season; I have not found it so. My hives are much lighter this year than they were this time last year, and have been losing on the average since 18th July; on 23rd June, most of them were as light as on 23rd April; from 23rd June to 20th June, there was a slight increase, and during the first twelve days of July the hives increased, on the average, at the rate of three-quarters-of-a-pound per day, but these same hives have since been retreating at nearly the rate of half-a-pound per week. Only stocks that were literally crammed with bees, from three to four hives, have given any glasses, and out of seventeen hives, I have not five of weight sufficient to stand the winter. I shall be gratified to know how my brother bee-keepers have fared. Can you name to me any safe and more easy method of preparing the wax than the common one, in a cloth strainer? Dr. Bevan speaks of a vessel, but gives no dimensions, and the difficulty I find in separating it from the cross, which I am told can only be done by some chemical process. Can you inform me what this process is?" "I am puzzled to account for 'B. B.' failure in the instance of his stocks, 2 and 13. I am decidedly of opinion that the massacre of the drones had nothing to do with it. May not the wet and windy weather we had in June have had something to do with it? I myself have lost a stock in the same way, which puzzled me exceedingly, as there was no queen found in it after the lapse of six weeks from the time the swarm issued. I can only account for it by supposing that some accident must have befallen the young queen when on an excursion from home in search of the drones, for the hive was very full of bees and drones, and on a careful examination of the hive, I found a large and most perfect royal cell, with the lid still attached to it, and fresh gnawed, evidently showing that a young queen of large size had not long issued from it. I remember, observing, some time ago, how unfortunate the season had been for any successful trial of experiments. I quite agree with B. B., that the season, on the whole, has been a very bad one. 'Tis true the hives 'looked up' a bit in the first half of July, so that I was privileged to take about 12 lbs. of beautiful honey-comb, in a super from one of my April artificial swarms, and expect to take about as much from two other hives, but what is this as the result of a whole season. None but the very strongest hives (in respect to population) will in most places have stored more than enough honey for their winter's supply, and I anticipate many a sad tale of failed and failing stocks next spring. Reverting to your correspondent's mishap, on reflection, it has occurred to me, that when a swarm has issued, and been located for a few hours in the old stock's place, it would be well to examine the latter, which may very easily be done, as but a comparatively small number of bees will then remain in it. Blow (through a veil of course) among the combs, which will drive the bees up, and then see if there be a good deal of sealed brood in the combs. The more the better; but if there should chance to be but little sealed up, there might be some danger of failure from a subsequent deficiency of population. In this case the swarm had better be removed elsewhere, and the old stock returned to its place. Will this explain B. B.'s failure? I see a correspondent, who signs himself 'J. W.', in your number for the 5th of August, in answering 'Doncaster,' of the 'safe practice' of removing the old stock, and putting the new swarm in its place, adds, 'I generally do it, and to advantage.' May I ask him how long

he has known of this plan, which, perhaps, though a recent discovery of my own, may have been known to Methuselah, and be 'as old as the hills' after all? It is written—'There is nothing new under the sun.' We should be greatly obliged to him for some details of the results of this mode of treating hives, in comparison with those of other systems.—A COUNTRY CURATE."

BEES: FUMIGATING, &c.—Cymro says:—"A friend of mine has three hives of bees, which he intended to stifle with brimstone, but has agreed to let me have the bees, and to empty the hive in what way I think proper, but objects to driving them, because the (straw) hive will be turned upside down, and fears the loss of honey from unsealed combs; and again, the bees may not take to the upper box. My present intention is to fumigate them with *Racodium cellare*, on their own hive boards; but I am at a loss to know how much smoke I may put in, or how long I am to blow through the fumigating box, and how long to let the smoke remain in the hive. I do not want to carry it too far, only sufficient to prevent them from flying or crawling about; and I want to unite the three hives in one, and let the three queens fight it out. What sized hive would be required to hold that quantity (the present hives are straw ones of the usual size, and were supplied with good swarms)? I am of opinion that one eighteen inches square inside, by ten inches deep, would not be too large. What think you? I have in my possession a swarm that was hived on the 14th of July; it is an old straw hive, and the person from whom I had it put a stick through the top hole, which prevents me from putting a glass of any description on the top; therefore I cannot feed them (when required) by the top hole. Now, I wish to make them quit their present residence, and take to a wooden har-hive. If I placed this straw one on the box, would they leave the upper, and build comb in the box, and let them enter through the lower hive board, and stop up the straw one? Would the same object be obtained by placing the new hive beside the old one, and let them enter that way? Would it be better to hive the three lots separately, until they recover themselves, for a day or so, then let them unite by placing the three boxes one on another, when altogether upon the fourth box underneath, and let them unite that way, and have but one entrance at the bottom?" "It is a pity 'Cymro's' friend will not let him drive the bees from his three stocks. There need be no fear of loss of honey running out at this period of the year; no combs actually unsealed can be so full of honey as to create that danger. However, if it cannot so be, 'Cymro' must fumigate as he proposes. His plan of fumigating the bees on their stand is not good. I have had experience of it. My present plan of conducting this operation is to turn a suitably-sized common hive bottom upwards in a pail. In the top (that is, bottom now) I stick a small flour-dredger (with a lid on), pierced all over, top and bottom, with innumerable holes. It is riveted to an iron spike about three or four inches long, which pierces into the straw, and makes it stand upright. Next fill the dredger with a good-sized bit of fungus, well-lighted, and when it smokes cheerily set the full hive quickly over it, and bind a cloth round to prevent the smoke from escaping. If it acts, there will soon be a famous din among the bees, then a profound silence, succeeded by a noise of *huffing* bees. Wait some fifteen minutes, and then lift off the upper hive. All three hives may be set over the fumigator at the same time, one after another, and he so united together at once without further trouble. But let 'Cymro' take care to provide them with a queen, for queens are very difficult to dislodge by merely fumigating. Should the fungus go out, it may be renewed as often as necessary. 'Cymro's' hive, eighteen inches square and ten inches deep, is twice too large for a stock to be reared now by artificial means. His swarm of the 14th of July will not descend into a box put under them to work comb this year, neither will they enter one put at the side.—A COUNTRY CURATE."

RAUNUNCULUS (Reginald Forbes).—Mr. Groom, Florist, Clapham Rise, recommends you the following:—*Amour*, 1s.; *Aachen*, 2s.; *Constantia*, 2s.; *Penzance*, 2s. 6d.; *Fauna*, 2s.; *Le Tombeau*, 1s.; *Alphonso*, 1s.; *Achilles*, 1s.; *Prince of Wales*, 2s. 6d. You propose planting scarlet and white Turbans as an edging to the named sorts, but you will not produce a good effect by so doing, as the Turbans should be planted in the autumn, and are generally in flower before the others, which most persons plant in the spring. Most of the *Anticulis* you mention are now out of cultivation near London, those obtainable, and a few others, are among the following:—*Grime's Primrose*, 3s. 6d.; *Oliver's Lovely Ann*, 3s. 6d.; *Pallett's Highland Boy*, 3s. 6d.; *Stretch's Emperor Alexander*, 4s.; *Taylor's Glory*, 4s. In our *Calendar*, b. means beginning of the month; m. the middle; and e. the end.

FOULSTON'S RUNNING FACILITIES (Gullman).—We cannot give you the maker's direction; we have applied ourselves, but can obtain no reply.

GOGLINGS (Ibid).—Our correspondent says:—"The weight of *Gallus* goslings is exceedingly good, as given in your paper of the 12th instant. Mr. Parker's three goslings, sent to the show at Lewes, weighed, at fourteen weeks old, 42½ lbs. They left home on Monday morning at half-past two, A.M., and did not arrive in Sussex till the evening of the same day. It was very hot weather, which, combined with a journey of between two and three hundred miles, and being knocked about from one station to another, to say nothing of being closely cooped up between fifty and sixty hours before they were weighed, for the Judges did not weigh them till the Wednesday morning (the day on which they were to inspect the poultry), all naturally tended to their losing weight, which accounts for their only weighing 41 lbs. on that morning."

FORCING CUCUMBERS (J. T.).—We, like you, have heard of the marvelous production of this fruit in three weeks from the seed, but we never saw it done, neither did our many gardener friends whom we have enquired of. The fact is this, seeds of good early-bearing cucumbers, sown the beginning of May, in a strong, growing heat, and afterwards skilfully attended to, will perhaps produce a fruit of fair table size in five or six weeks from the time of sowing. But what of that? Cucumbers are as plentiful as potatoes then, and what is accomplished in May could not be done in mid-winter. For frame purposes you will find *Cuthill's Black Spine* possessing as many good points as any we know of, including hardiness, fruitfulness, and good eating quality. The *Roman*

Emperor is likewise good, and so is the *Syon House*, but neither of them better than the first named.

VERY EARLY CUCUMBERS (A. Q.).—You cannot well carry cucumbers through the winter in an ordinary dung-heated frame. Fire-heat is necessary in some shape for such a purpose; you had better, therefore, continue those you have in bearing as long as you can, and then appropriate your frame to something else until the beginning of January. You may then sow your seed in a newly prepared bed, which maintain at a steady heat of 70°. The *Syon House* variety is the best for winter use, but some of the *Black Spine* varieties keep better after they are out, which is important when that is wanted. *Mild's Jewels*, besides those already mentioned, is an excellent fruit, and generally esteemed for its appearance and other good qualities.

EARLY POTATOES (1864).—The only way you can now obtain anything like new potatoes at Christmas is to plant tubers of last year on some dry border. These, by being kept, will have lost much of their vitality, and will remain to support a young brood until they are half grown, when they appear, but seldom taste like "young potatoes." As you mention having outhouses, they may be planted there, provided there is an open side for light; we have known it done in a cellar, but the produce was never satisfactory. As you mention growing them for profit, why not try *Mushrooms* instead? With a warm cellar and outhouse, and as we suppose you to have horse-dung, your chances of a remunerative crop is much more likely that way than with potatoes or cucumbers.

CARRIAGE OF EGGS.—Mr. Marshall, of Durham, says:—"In May last, I purchased of Mr. Punched a pair of splendid Cochins, but, to my astonishment, the hen went constantly to the nest to lay, but evidently was unfruitful, as no eggs made their appearance; consequently I wrote to Mr. Punched, asking him the cause, and he very generously informed me that he had heard of similar instances (although rare), and offered to send me another hen in lieu of her, or a hatching of eggs; the latter I accepted, and he kindly sent me twenty-six eggs, carefully packed in bran, which arrived safe all but one. These I put under two nurse hens, on peat-turf nests, and they produced twenty-four chickens, all of which are doing well, and will weigh at this time about three pounds each. What is very remarkable, the barren hen began to sit about six weeks ago, and my gardener's wife put a hatching of Shanghai China eggs from a bird sent to me last year by Blake, of Gosport, and the cockerel sent by Mr. Punched, and she now has a fine brood of twelve chickens, and nursing them with the same assiduity as the very best breeding hens. Mr. Punched's conduct gives confidence to future dealings, and contrast with that of some dealers in horticultural productions that are puff off and sold for high prices, and prove worthless; yet I am happy to say there are exceptions, for Mr. Chaters, of Saffron Walden's now hollyhocks are now blooming in my gardens most satisfactory, and well worth the money I paid for them."

ABIES, ITS DERIVATION.—*Sigma* has much obliged us by the following note:—"In the July part p. 373, Mr. Appleby gives the derivation of *Abies* as from the Latin *abies*, to rise. Now, *abies* has no such meaning at all, and does not really admit of such an idea; and *abies* is usually considered as a Latin root, i.e., without any derivation from a known Latin word. As I should not venture to criticise Mr. Appleby in his art, so neither must he find fault with me if I claim superiority in mine, as I am expected, by my profession, to know something of language, and to correct mistakes. Etymology is dangerous work; but if I was required to find a root for *abies*, which I believe is an old Etruscan word, I should surmise it would be traced back to some eastern stock, which gave birth also to the Hebrew word *abib*, which signifies "a spike of barley," and a word derived from it signifies also "vigour." These ideas are by no means foreign to the image called up in the mind in looking at the young shoots of a fir. The Jewish month *Abib* was so called because at that season the barley came into ear."

DIELYNIA SPECTABILIS (R. S. Barnes).—The three young plants of this plant, struck this season, and now growing in the garden, will be more safe in the ground all the winter. It is as hardy as a common Peony. If you want it to flower early, take up the plants at the beginning of February, pot them, and the slightest heat will soon cause them to flower. If a very hard winter occurs, put two or three inches of coal-ashes over the roots as they are so young.

RHODODENDRONS.—J. G. wishes to know where the following can be purchased:—*Rhododendron chrysanthemum*, *R. stramineum*, *R. hirsutum flavum*, *R. ferrugineum album*, and *Japan honey-suckle*.

SAXIFRAGA HYPOPHYLLOIDES AS AN EDGING.—"I have grown for an edging the *Saxifraga hypnoides*, and three years' trial has proved it not only the handsomest but the best in every respect. You mention it favourably in your *Gardener's Dictionary*, but I do not think you have depicted the attention sufficiently of gentlemen gardeners to the plant. I can safely say that for two years I have had it in my front garden; not three persons in passing have known what it is, and thousands must have passed by; and I am certain every third person stops to admire it. Harbours neither insects or weeds are great advantages."—*R. S. Barnes, Brockley Road, Deptford.*

RHEUM LEAVES (J. S.).—There is no specific time when gardeners cease from pulling these. The more they are taken from the plants, the weaker and less productive will these be found next year. If the leaves are in great request, it would be a good plan to have two plantations, and to leave one ungathered from every second year to allow it to recover strength.

SRA SAND (A Subscriber).—If it is sharp siliceous sand, and the salt is washed thoroughly out of it, it will answer for potting purposes. If you have no peat, it would be possible to make a compost of that sand, mixed with old turf and old cowdung, that would do for *Azaleas*, &c. Of imbricated *Camelias*, *Sabins*, rose-coloured, and *Indica*, light red, would probably suit you. We think your *Geranium* leaf has been severely attacked by the thrips, the mouldy appearance being a secondary consequence. The *Planter's Guide* is at page 269 of vol. i., and answers to it at page 47 of vol. ii.

CABICA PAPAYA (A. Stuart).—This, raised from seed sent you from Ceylon, is the common Papaya Tree of India. It requires a stove, and will grow fifteen or twenty feet high. It would require great care to

induce it to bear fruit in this country, and that fruit is certainly not worth the trouble.

WOODEN SHELTERS (Minnie).—These, except in severe weather, are sufficient protection to plants in cold pits; in very cold weather put some hay between the shelter and the glass.

TRUE COCHIN-CHINA FOWLS (S. M. R.).—You ask for a description of these, and for an answer we must refer you to *Antler Bone's* communication at page 276 of our 6th volume. You will also find drawings of them at page 137 of our 7th volume; these portraits, however, do not do them justice, and the drooping feathers in the cock's tail are much too long.

MUMMY RASPBERRY, &c. (Henry).—Our correspondent wishes to know where he can obtain seeds of this? We know of no *Raspberry* that comes into bearing when all other varieties are over except the *White Albion*. We have gathered a good plentiful of its fruit in December. A very good pear to precede the Jargonelle is the *Citron des Carmes*, sometimes called the Madeline, and *Rose Angle Early*; a very good pear to follow the Jargonelle is the *Bonne d'Anjou*.

PINE APPLES (An Eager Farmer).—You must read *Hamilton on the Pine Apple*. You will have seen what Mr. Errington has said, and he will, from time to time, treat of their culture.

NAMES OF PLANTS (Sigma).—Your *Verbena* were completely dried up. Out flowers will only have their freshness preserved by being packed in plenty of damp moss. (*Mrs. Taylor*).—Your plant is *Hydrangea nivalis*, or Snowy-leaved *Hydrangea*. It is a native of Carolina and hardy. (*Rev. R. M. E.*).—Your plant is *Cichorium intybus*, Wild Succory, or Chicory. Any of the hardy annuals will do now. (*James Riley*).—The parasite which has destroyed part of your clover is the Greater Dodder, *Cuscuta Europaea*.

CALENDAR FOR SEPTEMBER.

• FLOWER GARDEN.

ACONITE (Winter), plant, c. **ANEMONES**, plant heat, c.; sow, b. **ANNUALS** (Hardy), sow, b. **ARICULAS** not shifted in August now remove; water and shade; prepare sowing to protect in autumn and winter; sow, b. **BUD** perpetual roses to the end of the month. **BULBOUS-ROOTS**, plant for early blooming, c. **CARNATION** layers remove, b. **CHRYSAETHYMUM**, plant cuttings, &c., b. **CUT** down the roots of large specimens intended to be taken up next month, b. **CUT** in large specimens of geraniums, &c., in the beds to be potted, as soon as they break, to make specimens of, b. **CUTTINGS** of evergreens, put in, b. **DAHLIAS**, number and make list of, while in perfection, describing their colour, height, &c. **DASS** borders assiduously. **ENGINES**, trim, plant. **EVERGREENS**, plant, b.; make layers. **FIBROUS-ROOTED** perennials, propagate by slips, parting roots, &c. **GRASS**, mow and roll; sow, b. **GRAVEL**, weed and roll. **GUERNSEY LILIES**, pot. **HEARTSEASE**, plant cuttings; trim old. **HEDGES**, clip, c.; it is the best time. **MIGNONETTES**, sow in pots, to shelter in frames. **ROOTED** PIPINGS, of pinks, &c., plant out for blooming. **PLANTING** EVERGREENS, generally, commence, c. **POLYANTHUSES**, plant. **RANUNCULUS**, plant best, c.; sow, b. **DOUBLE** ROCKETS, divide and transplant. **ROSES**, cut down, which must be removed at Michaelmas, ten days before taking up. **SEEDLINGS**, plant out. **SEEDS**, gather, as ripe, and keep down seed-pots in flower-beds. **TRANSPLANT** perennials, c. **TUBEROUS-ROOTED** plants, transplant. **TURF**, lay. **VERBENAS**, cut the roots of favourite sorts six inches from the stem; water them, and in three weeks they may be removed safely to be kept in pots; a few plants thus treated are better than many cuttings. **WATER** Annuals and other plants in dry weather. **YUCCAS** in, or showing for, bloom, give abundance of water to.

D. BEATON.

GREENHOUSE.

AIR, give freely night and day, unless when very stormy. **ANNUALS**, such as *Callistina*, *Nemophilis*, *Schizanthus*, of sorts, sow towards the end of the month, for blooming in spring and early summer. **BULBS**, pot for early blooming, such as *Hyacinthus*, *Narcissus*, *Tulips*, &c., also *Lachenalia*, *Erodium*, &c. **CAMELLIAS**, still expose, but defend from heavy rains. **CUTTINGS** may still be made, and buddings proceeded with. **CINERARIAS**, sow for late blooming; prick off seedlings for spring flowering; shift into flower-pots for winter flowering. **CALCEOLARIAS**, sow seed; propagate by cuttings under hand-lights, and shift small plants already struck; shrubby kinds for the flower-garden will be time enough after the middle of the month. **ERICAS** and **AZALEAS**, get under shelter, ready to be housed by the end of the month. **GERANIUMS**, **MYRTLES**, **SALVIA**, &c., propagate by cuttings, shift into larger pots, to be established before winter, and prepare for taking up out of the open border by cutting round the roots, doing only one half at a time. Where there is not plenty of room, cuttings struck early will answer better than old plants taken up, and will also save much labour. **GLASS**, **FLUES**, &c., clean and repair. **PLANTS**, clean, tie, arrange. **POTS**, free from moss and filth, and fresh surface with suitable compost. In using new pots for hard-wooded plants, let them all be soaked, and then dried, before using. **SEEDLINGS** of all kinds, prick out as soon as they can be handled. **PROPAGATE** all half-hardy things, such as *Geraniums*, *Fuchsias*, *Sutias*, and especially *Calceolarias*, *Pelargonias*, *Verbenas*, &c.; the last three named will do better than if struck earlier, the smallest pieces will do best. They may either be planted in light sandy compost, in pots, or in a bed on a shady border; if on a north aspect, no shading will be required. **WATERS** will still be abundantly required for plants growing freely, and those intended to bloom in winter, such as *Primulas*, *Cinerarias*, and *Oxyanthemums*, should have manure-water given freely. Whenever you observe the first flower-bud of a *Oxyanthemum*, though no larger than a pin's head, you may give the clear manure-water freely. Water should be given sparingly to plants that are to be put into a state of rest, just keeping them from flagging. All **SPERMATOPHYTES** will now do better next season, the less water they receive, provided their stems are not rendered very limp and soft. **TROPEOLIDS** with tuberous roots, pot whenever they begin to vegetate; they do not like shifting, therefore give a good-

sized pot at once; give very little water until the pot is getting filled with roots, as they cannot bear sour sodden soil; let the pots be well drained. CLIMBERS will soon require cutting that have been growing rather naturally, in order that more light may be given to the plants below. If the house plants can be kept out of the house for a month longer, the creepers, to be beautiful, will require ample waterings.

R. FISH.

ORCHID HOUSE.

AIR, give only on bright sunny days, from 10 o'clock till 2. BLOCKS, continue to syringe morning and evening, the first half of the month; the latter end in the mornings only. BASKETS may be kept rather drier, excepting such as *Stanhopeas* that are growing; let these be dipped in tepid water once a week, at least, using discretion, according to the state they are in as to being wet or dry. DENDROBIIUM, many species will now have perfected their pseudo-bulbs for the season; let such be immediately removed into a cooler house, and have no water given them. Other kinds will require the same treatment as soon as the full growth is attained. GROWING PLANTS may still be retained in the warm, moist atmosphere of the orchid-house, and be kept moist at the roots. HEAT in this month may be reduced a few degrees. Sudden changes are always dangerous; by gradually reducing the heat the plants become inured to the change. INSECTS, search for diligently, and destroy; every one destroyed now will prevent myriads from being bred next year. LELIA AUTUMNALIS will be growing rapidly; keep it well supplied with water, as upon the strength it acquires during this month will depend the number of flowers on the spike in October or November. Let it give to all plants that have made their annual growth; without this they would continue to grow and never flower. SHADE may be much reduced now, except on very bright days during the beginning of the month. WATER, continue to give to growing plants till the year's growth is completed, then withhold it, excepting to a few species without pseudo-bulbs, which, not having that storehouse of food laid up, must have occasional dampings and sprinklings.

T. APPELEY.

PLANT STOVE.

AIR, give abundantly on all favourable occasions. ACHIMENES going out of bloom, place in a cold pit, giving water to induce them to go early to rest. ACHIMENES PICTA, continue to grow on, to flower at Christmas. CLIMBERS on the rafters, commence to reduce greatly, by pruning off all superfluous shoots, tying the rest in neatly. In pots trained on trellises, these would be greatly benefited by being placed out-of-doors, in some sheltered nook, for a week or two at the commencement of this month; when set out, lay them on one side on a grass plot, and give the leaves on the under side a severe syringing. This would clear them of the red spider, at all events. FRAMES containing stove plants must now be covered up every night with double mats; uncover early, and lift up the light for a minute or two to let out foul air, and let in fresh and sweet; give these plants water only in the morning. GERANEA ZEBRINA: those started early will now be in flower; keep the rest growing by keeping up a heat of 75° or 78°, and supply water in a tepid state in due proportion. Other kinds of GERANEA and GLOXINIA gone out of bloom place in cool frames, and withhold water, to cause them to grow gradually to rest; plants of this kind struck in the spring will now be in flower; keep them in the stove, and give water. PLANTS, generally, that have bloomed, give less water and heat to. WINTER-BLOOMING PLANTS, give every encouragement to, to cause a fine bloom. SOILS, procure and prepare for use by frequently turning them over; keep them clear of weeds at all times.

T. APPELEY.

FLORIST'S FLOWERS.

ANEMONES, plant in rich light soil. AURICULAS and BOLTANTHUSES, remove towards the end of the month into winter shelter; take the opportunity to cleanse and top-dress slightly. CARNATIONS and PICOTEES, take off layers, and pot them in pairs in four-and-a-half inch pots; such layers as have not rooted, pot, and place in a frame, kept close, till they root. CHRYSANTHEMUMS, give liquid-manure to; place in the greenhouse a few that show bloom, to flower early; protect from early frosts, should any occur. CINERARIAS, pot, and advance a stage. DAMEAS, continue to protect the blooms from sun, rain, and insects; keep them well tied in, to prevent the autumnal winds from breaking off the side shoots. FUCHSIAS, in pots, gone out of bloom, remove out of the greenhouse, and place in a situation where severe frost will not reach them; under a stage in the greenhouse, or in a cold pit, will do. LAIE (bulbous), plant latter end of the month, in rich borders or beds. LAVAS, of Carnations, Pansies, and Pinks, take off, when as rooted, and pot. PINKS, prepare the bed or beds to plant out layers in; mix freely the soil with well decomposed littery dung and leaf-mould, plant the pipings or young plants out towards the end of the month. HARMOCULUS, if not all taken up must be done instantly, or the autumn rains will start them into growth prematurely; examine roots of taken up previously, and if mouldy cast them in the sun to dry more effectually. ROSES cut off all decayed blooms as they occur. TULIP-BUDS, prepare, by adding dung to the soil, if not exhausted, or by making an entire new bed, see that it is well drained, and place two inches of cow-dung over the drainage.

T. APPELEY.

FRUIT GARDEN.

APPLES, gather and store as they ripen; still war against the American blight. BUDDING, slacken the bandages about the middle of the month, and pinch late shoots on the stocks. CURRANTS, preserve by covering. CUMQUIN (Morella), beware of wasps. CHAMBERLAIN, collect. DAMSONS, look to, as they ripen. Figs, stop every shoot, and thin superfluous ones. GOOSEBERRIES, destroy the latest caterpillars, and protect carefully retarded fruit. INSECTS, of all kinds, destroy incessantly. MULBERRIES, gather. NUTS, attend to the ripening of. PLUMS, protect from wasps. PEARS, stop all growing wood; gather carefully as they ripen. STOPPING, in general, carry out completely before the end. STRAWBERRIES, destroy all late runners, and cultivate liberally those

planted in July and August. TOMATOES, pinch every shoot, and cut away half the roots, at least, if grown; also prune away every late shoot. VINES, stop every growing shoot, and begin to strip away early pinched laterals where they shade the earliest formed leaves. R. ERINGTON.

FRUIT FORCING.

AIR, give freely to all forcing-beds. Air-moisture be more sparing of. BOTTOM-HEAT must decline gradually with the decrease of light. CUCUMBERS, exercise the same care over as in April. CHERRIES: the end is a good time to shift forcing cherries. CLEANING: cleanse all forcing structures as they become at liberty. EARLY FORCING: study to get things thus destined gradually into a state of rest. FIGS, see that the later crops do not suffer through drought. FLUKE: clean all flues in houses at rest during the month. GRAPES, use the scissors weekly to those ripe; give abundance of air, and use fire-heat in damp periods. LIME, renew. MELONS, continue a lively heat with free ventilation; keep the fruit from contact with soil, and frequently dress them. PEACHES, as *Peaches*. PINES: fruiters, keep up lively heat, stir, and water the tan, and use liquid-manure where dry: *Succasions*, give plenty of air to harden. Shift any requiring it, for the last time this season. PEACHES, stop growing shoots; syringe frequently; use dung-water if still green, and be sure to exterminate every red spider. PAINTING, get done in rest-houses. RAISINS, get done in all structures at liberty. SULPHUR apply, and unremittingly, in all houses, especially Vineries. SEA-KALE, crush the leaves of a few strong crowns for very early forcing in the end. STRAWBERRIES, in pots, keep down runners; give dung water liberally, and plunge in a sunny spot. VENTILATION, be liberal in. WASPS, take nests. R. ERINGTON.

KITCHEN-GARDEN.

ANGELICA, thin out, and earth-stir in the seed-bed where the plants may remain until the spring. ANOMATIC POT HERBS, finish gathering. ARTICHOKEs, break down stems, and keep clear of weeds. ASPARAGUS-seeds, weed. BARN, cut, and dry. BEANS, keep clear of weeds, and seed collect, and dry off well; store them away in the pods. BEET, take up as wanted. BORAGE, earth-stir amongst, and collect seed. BOK-CHOO, plant out, and use the hoe freely amongst. BROCOLI, plant, and keep the earth stirred in fine dry days. BURNER, plant. CARBAGEs, plant out; keep the seed-beds free from weeds, and earth-stir. *Red Dutch Cabbages* are ready for pickling. CARDOUS, earth up well in dry weather. CARROTS, attend to thinning and earth-stirring the August-sown crops. CAULIFLOWER PLANTS, prick out in rich, open, warm borders, so as to have a good choice of plants to stand the winter. CELERY, earth-up freely in dry weather; let the earth be well forked-up and broken to pieces previously to spading it up to the rows, and plant out successional crops, which will be found very useful to the cook during the winter and spring months. CEREVEL, sow. COLEWORTS, plant out. CORIANDER, sow. CORN SALAD, sow. CRESS (American), sow and plant. CUCUMBERS, attend to in pits and frames, top and clear away all decayed leaves, &c.; strike cuttings of favourite kinds, or sow seeds, for winter and spring growth. ENDIVE, plant out plentifully; tie up, or otherwise cover up to blanch. FENNEL, plant and cut down. HORING, attend to in all cases in dry weather, and be the more attentive to this between heavy showers. HYACINTH, plant. JERUSALEM ARTICHOKEs, keep clear of weeds; do not injure the stems; take up roots if required for use. KIDNEY-BEANS, earth-stir amongst, and collect seeds; put away dry in pods. LEEKS, plant and earth-stir. LETTUCEs may still be sown in warm borders, but attend to those which were sown at proper time; prick out from the seed-beds; keep them clear from weeds, so as to have a good winter supply of sturdy plants; thin up, full grown. MELONS, be sparing with water at this season; give plenty of air to ripening fruit; keep up warmth by backing up with linings, &c.; shut up early. MINT, still cut and dry. MUSHROOM SPAWN, collect; this is often found when breaking up old hotbeds; put it away in close dry sheds until wanted. MUSHROOM-BEDS, make; this is the best season in the whole year for making mushroom-beds in any way, from the proper mushroom-house to the common span-roof bed in the open air to be covered with straw. NATURTUMS, gather as they become fit for use. ONIONS, press down to promote their bulbing, and take up those that are ripe; dry well before storing away for winter; attend to the August-sown; weed and earth-stir. POTATOES, take up and store away, and should be looked over shortly and often, after being taken in until all the diseased ones are removed. PARSLEY, cut down and transplant in some warm corner for winter supply. PEAS, look after birds and collect seed of, dry them well, and store them away in their pods. PENNYROYAL, cut and dry. MARJORAM, the same. RADISHES, sow in warm borders. REUBENS, clear from weeds. SAGE and SAVORY may be planted. SAVOYS, plant and earth-stir. SEA-KALE-BEDS, keep clear from weeds. SEEDS, gather of all kinds as they ripen. SMALL SALADINGS, sow. SORREL, plant. SPINACH, sow in warm border; attend to thinning-out the August-sown crops from six to eight inches apart in the rows. TANSY and TARAGON, attend to if required. THYME, plant. TURNIPS, sow of the best little early kinds; thin and hoe advancing crops. WATERCRESS, plant. WATERING, in dry weather, must be particularly attended to previous to planting, or prickling out any kind of young plants, or sowing the same. Water well both before and after. ATTEND to earthing-up, earth-stirring, and hoeing in general, in dry weather; the rake may be advantageously used in many cases after the hoe at this catching season of the year. Many good managers only plant CARBAGES in one week of the whole year, and that in the first week in September, and from plants sown about the 21st of July; the soil to receive them should be made thoroughly rich. Others make a good planting at this time, and another in March, which will give an excellent supply for the whole year. T. WEAVER.

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THE COTTAGE GARDENER

AND

COUNTRY GENTLEMAN'S COMPANION.

CONDUCTED BY GEORGE W. JOHNSON, ESQ.

No. 210.]

THURSDAY, OCTOBER 7, 1852.

[PRICE 3d.]

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BENNETT'S MODEL WATCH
is a combination of all the recent improve-
ments for performance, taste, and economy,
securing to the wearer the indispensable comfort
of perfect time. In silver cases, from 4 guineas
in 11 cases from 10 guineas. JOHN BEN-
NETT 11, manufacturer to the Royal Observatory,
6, of Old-nice, Admiralty, and the Queen,
Chapel.

HYACINTHS, CROCUS, TULIPS,
and other Dutch Bulbs
DAVID COLEBELL and BENJAMIN (suc-
cessors to Frederick Warner, 28, Cornhill),
have received a large importation of the above,
including the newest and choicest varieties,
which have all been selected from the best and
most extensive growers.
Priced lists will be forwarded post free, on
application. Retail shop 28, Moorgate Street,
March 28, Lawrence Poultry Lane, City.

TWO AMATEUR FLORISTS—
TO BE HILL in Small Gardens suitable
for Amateur Florists a plot of excellent Land,
adjoining the Lea Bridge Station of the
Northern and Eastern Counties Railway. For
particulars &c, apply personally, or by letter
(enclosing a stamp) to H. ALEXANDER,
Auctioneer, near Ambrose Terrace, Shacklewell.

HYACINTHS, DUTCH BULBS,
&c.—HENRY GROOM, Clapham Rise,
near London by appointment, Florist to Her
Majesty the Queen and to His Majesty the
King of Saxony begs to say that he has re-
ceived his usual supply of Hyacinths, and
Dutch Bulbs in very fine condition. His
Catalogue of Bulbs &c will be forwarded on
application.

IMPORTANT DECISION IN
CHANCERY! One Thousand Pounds
and Damages!—The Advertisers have obtained a
Writ in Chancery, in *rebus WOTHERSPOON*
v. *MILNE*, whereby they can hereafter proceed
against any party who shall attempt to sell any
Starch in imitation of the **GLENFIELD**
DOUBLE REFINED POWDER STARCH.
It may be considered a tribute to the un-
rivalled merits of the above Starch that other
Manufacturers should endeavour to facilitate
the sale of an inferior commodity by introducing
it to the market under the name of Glenfield
Starch, but the Advertisers being possessed of
Testimonials from such unquestionable authority
as the Laureates to Her Majesty, her
Excellency the Countess of Eglinton, the Mar-
chioness of Breadalbane, &c, cannot, in justice
to themselves, permit such fraudulent practices.
They therefore caution all Dealers in Starch,
that they will take full advantage of the above
Writ, and the Public to observe that their
packets are marked with the name of the
Manufacturer, R. WOTHERSPOON.

The Ladies are respectfully requested to ob-
serve, that for Clearness and Purity the Glen-
field Patent Starch stands unrivalled—being
manufactured from the finest East India Sugar
Sold by all Grocers, Druggists, &c, and
Wholesale of the Manufacturers, R. WOTHERS-
POON and Co, 40, Dunlop Street, Glasgow,
and WOTHERSPOON, MACFARLANE and Co, 40,
King William Street, City, London.

CHOICE COLLECTION OF TULIPS—Mr ALEXANDER will sell
by Auction, at the Auction-Mart, City (near the Bank of England), on Tuesday, October 12,
1852, at 12 o'clock, a choice and valuable collection of Tulips, the property of the late Mr. New,
of the Derby Arms, Kirkdale. They comprise Gibbons's Princess Royal, Enchantress, Maid of
Orleans, Maid of Athens Countess of Harrington, Lady F. Hastings, Purple Perfumion, Cheltenham
Beauty, Britannia, Prince Albert, Noble Monarch, Wood of Wensburg, Thais, Pandora, Salvatore
Ross, George Grenvy, Louis XVI, David, &c. Among the Rose are Annette, King of Searles,
Lady Leicester, Lady Stanley, Lady Vernon, Dixon's Rose, Jeffery's Elizabeth, Headley's Rose,
Lillem, Mary Lamb Countess of Eglinton, Rose Lac Canopus de Craik, &c. The Bards comprise
Strong's King, Pilot, Fricolor, Captain Sleath, Competitor, Marcellus, Pompe Funsire, Cora-
tion New's Lewis, Appell, Lord Lilford, &c. The above will present a favourable opportunity to
persons wishing to procure the best sorts, as the whole will be sold without the least reserve.
May be viewed the morning of Sale. Catalogues had at the Mart, of Messrs DAWSON, COTTELL
and BENHAM, Seedsmen, Moorgate Street, of H. ALEXANDER, Shacklewell, also of Mrs. NAW,
Kirkdale, upon enclosing four stamps.

TWO NEW STRAWBERRIES—of the largest size, beautiful shape and
colour, and exquisite flavour—WILLIAM NICHOLSON having succeeded in raising Two
Seedling Strawberries, possessing the above desirable properties, he has named them **AJAX**
and **RUBY** and is now sending out strong, well-rooted plants, at 2s per 100, 4s 5s for 50, and 13s
for 25, box included (Carriage to be paid by the purchaser).
The "Ajax" was exhibited in Covent Garden Market last year. Nine of the berries weighed
16 ozs, and one measured nine inches in circumference. The fruit is of a fine globular shape,
the colour a rich dark crimson—remarkably juicy and high flavoured.
The parent plant of "Ruby" is now six years old, in full bearing and produced 146 perfect
fruit this season. Colour, ruby, shape fine oval, size, a little less than the "Queen." Of fine
flavour, very prolific, and continues bearing much longer than any other variety, fruit having been
gathered from it this season up to the 28th of August.
Egglecliffe, near Yarm, Yorkshire, September, 1852.

TESTIMONIALS.
Sir,—Your Seedling Strawberry appears to be a distinct, and, in my opinion, most desirable
variety. Some of the fruit you sent were of a beautiful cockscomb form, but its general shape
resembles the old favourite, Keen's Seedling. The colour is a rich, dark glossy red, the pulp
remarkably juicy and high flavoured, size, very large. As a Desert Fruit it surpasses all the
varieties in cultivation.
Dear Sir,—The "Ruby" Strawberry, a few plants of which you sent me last year, is of a fine
flavour when thoroughly ripe, and about a fortnight later than Keen's. It is a most prolific
bearer. The "Ajax" Strawberry is also a first-rate one, and is just what we want. The time
that you sent me last year after two days' travelling, weighed 16 ozs—I am, dear Sir, yours truly,
Gambrell, June 28th, 1852.

Other Testimonials of their merits have been received, which W. N. will be happy to produce
on application.

STRAWBERRY PLANTS—The under mentioned first-rate varieties,
which have all been thoroughly proved to the satisfaction of their growers, are now ready for
sending out.
Frollop's Victoria. This is one of the finest
Strawberries yet sent out, it has been ex-
hibited at numerous exhibitions last season and
this, and proved superior to all others for its
superb quality, and, as an early bearer, is not
equalled, 2s per 100, or 3s per dozen plants.
"Glenfield," Perpetual, or Double Bearing
Strawberry, 2s per 100, or 3s per dozen.
Myatt's surprise, extra fine per 100
Prince Arthur, ditto 10s 6d
Black Prince, a first-rate early variety 7 6
Prollop, very fine and early 5 0
Eleanor, the best and latest bearing
Strawberry, many of the fruit growing
to 24 ozs, very firm, and first-rate for
travelling 5 0
Bright Queen (true) 2 6
Britannia (very fine) 2 6
Starling Castle Strawberry (fine) 2 6
Elixa 2 6
Globe 2 6
Ad Mead 2 6
"Goliath" 2 6

The above are strong, well-rooted plants, and such as will ensure satisfaction. Fine plants can
be had for setting, if required, which were picked off for the purpose early in the spring.
N.B.—These Strawberries at 3s per dozen will be sent postage and packing free.
Fine Antirrhinum, all saved from striped and spotted varieties, such as will give every satisfac-
tion, and bloom early next spring, 5s per 100.
Sweet Williams, 48 superb varieties, 3s per 100.
Seedling Hollyhocks, extra fine saved from all the best varieties in cultivation, and such as will
give satisfaction, 2s per 100, or 3s per dozen. (One hundred of these superb Hollyhocks were
planted out in a bed last autumn, and 80 of them were proved to be double flowers, and equal to
the varieties they were saved from.)
A remuneration must accompany the order, either by penny postage stamps or a post office order
on receipt of which the whole, or any quantity of the above, will be sent hamper and package free.
EDWARD TILLY, Nurseryman, Seedsmen, and Florist, 14, Abbey Churchyard, Bath, Somerset.

WEEKLY CALENDAR.

M	W	D	OCTOBER 7—13, 1852.	WEATHER NEAR LONDON IN 1851.				Sun	Sun	Moon	Moon's	Clock	Day of
				Barometer.	Thermo.	Wind.	Rain in In.						
7	Tu		Beech leaves fall.	30.785—30.500	66—40	S.W.	0.9	13 a. 0	22 a. 5	11 18	24	12 15	261
8	F		White Poplar leaves fall.	30.651—30.638	50—32	W.	13	15	21	15	25	12 25	262
9	S		Hazel yellow.	30.638—30.622	66—46	S.	—	16	18	0 31	26	12 48	263
10	Su		SUNDAY AFTER TRINITY. Cam. T. h.	30.168—30.335	66—46	W.	—	18	16	1 32	27	12 5	264
11	M		Oldfich. Bay. Oxford Term begins.	30.334—30.189	48—33	S.	—	20	14	2 10	28	12 18	265
12	Tu		Fieldfare comes.	30.368—30.274	66—54	S.	—	21	13	4 42	29	12 32	266
13	W		Elder leaves fall.	30.130—30.090	62—54	S.W.	0.4	23	10	sets.	30	12 47	267

METEOROLOGICAL OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 61° and 43° respectively. The greatest heat, 78°, occurred on the 13th in 1845; and the lowest cold, 26°, on the 13th in 1850. During the period 54 days were fine, and on 21 rain fell.

RUBY-FLOWERED CAMPTOSEMA.

(Camptosema rubicunda.)



PLANTS of this comparatively new genus have been likened to, and called Kennedyas, in gardens. In their outward appearance, and in their general habit, they much resemble some of the species of Kennedyas, Zichyas, and Hardenbergias, yet, when they are examined botanically, they exhibit a wide departure from that group, and come nearer to Canavallias and Diocleas. The genus was founded by Hooker and Arnott, and the name derived from *kamptos*, bent, and *sema*, a standard, alluding to the form of the

flower branches. Instead of *Papilionaceae*, as formerly, all the pea-flowering, and all plants, whether with pea-flowers or not, that bear their seeds in pea or bean-like pods, as the *Acacias*, are now called *Leguminosae* plants, because such pods, in the language of botany, are called *legumes*; and to get rid of the old associations about pea-flowers, for *papilionaceae*, leguminous plants are now called *Fabaceae*, or *Beanworts*. This species of *Camptosema* is a native of Brazil—a very gay climber, with ruby-coloured, pea-like flowers hanging down in long racemes, and producing a fine effect. It requires the heat of a stove to make the most of it, but a warm conservatory will probably be found sufficient for it. It was first introduced to the German gardens four or five years ago, under the name of *Kennedyas splendens*. Leaflets smooth, milky-green beneath; racemes of flowers about nine inches long, drooping; calyx with two small bractes at the base, somewhat two-lipped, and from 4 to 6-lobed; petals nearly equal, deep ruby-red in colour, the largest rather bent back, clawed with two blunt teeth at the base of the lamina; other petals clawed, each with two blunt teeth at the base of the lamina. It is in the *Diadelphia Decandria* of Linnæus. The stamens are in two groups, nine and one.—*Botanical Mag.*, 4008.

Culture and Propagation.—From what I have learnt about this new fine climber, I have no doubt but that it will succeed well where the *Beaumontia grandiflora* and *Strophanotis floribunda* thrive and flower. It is true the latter will do just as well in the Calcutta orchid-house, the common stove, the early vinery, and the warm conservatory; but the *Beaumontia* will not do in either heat nor cold—that is, in a stove or in a greenhouse—but in a place intermediate between the two; and such intermediate temperature, I am quite sure, is best for this *Camptosema*; and, being a strong grower, it must have sufficient head-room to extend itself freely before it will flower much. Cuttings from small side shoots is the nursery way of propagation, but, for private use, make layers of long shoots of last year, in the spring, and so get full-grown plants at once. D. BEATON.

No one better than an Editor knows the impossibility of acting so as to please everybody, and even in enlarging our paper, at a certain expenditure of several hundreds of pounds, and with a total uncertainty as to any remunerative return, we are quite sure of displeasing some of our readers. We shall regret the displeasure of even one of them, but conscious of the soundness of our intentions, we hope all things, and pursue our way. That we have been known for four years to our readers, and we can assure them that "the old path" will not be diverted, but only widened. We have felt that for some time, Poultry, and other intelligence, though strictly within our original purpose, have trespassed upon space that should be devoted to Gardening, yet, Poultry, Bees, the Aviary, and Farming, are subjects on which a large proportion of our subscribers demand from us information. Then again, we have been asked not to print advertisements so that

these must be bound up in the volume; whilst other, and very numerous, parties have required, that to these advertisements we should give additional space.

We are also fully conscious of the truth of an opinion expressed in a recent number of *The Quarterly Review*, that the contents of our little work are as suitable for the cottage of gentility, with double coach-house, as that usually tenanted by the labourer; but while we admit thus much, we well know it is, and has been successfully, our aim to write so as to be clear and useful to all. We have the best of all evidence, that the man of education, as well as the self-taught labourer, are satisfied with our pages; and although we shall so far meet the criticism of our Quarterly contemporaries as to add to our present title that of *THE COUNTRY GENTLEMAN'S COMPANION*, and while it will be our continued study to cultivate the good will of that important class, we shall still pursue our course unaltered, still study to

be THE COTTAGE GARDENER, but with its usefulness again increased. In testimony of this, and we have other new stores of information placed at our disposal, we offer the present number as the best of evidence.

In our last number we stated our conviction that the days of the Potato are not yet brought to a close, but that we look forward with confidence to a recurrence of that state of health in the plant, when unmurained crops will be usual, and murrained crops rare. We stated, also, our reasons for thus hoping, and one of those reasons is, that, even in the worst murrained of years, we find many instances of crops entirely exempt from the disease. This exemption is not of rare occurrence, and though the circumstances occasioning such exemption are not with certainty known, yet the exemption demonstrates that such circumstances exist. If they exist, they can be ascertained; and, when ascertained, the days of safety to the potato will be restored.

One such instance of exemption has been communicated to us by one of the best practical horticulturists we know—Mr. Weaver, gardener to the Warden of Winchester College. He says—"Early this spring I received thirteen very handsome potatoes from a gentleman of this neighbourhood, who is fond of having good potatoes at his table every day. They are called the *Dalmahoy Seedling*, being raised by Lord Morton's steward, at his lordship's seat, Dalmahoy, near Edinburgh. They were all very sizeable—from 3 inches to 3½ inches, the widest way of them—and I determined to plant them whole. But where could I plant them? was the next question, as nearly every inch of our ground was under crop at the time. At last, finding a small plot alongside some globe artichokes, a line being set down about five feet wide from the artichokes, here I planted the sets, two feet six inches from set to set in the row. This was done on the 18th of March. The row stood clear of everything excepting a few weeds; the plants were not earthed up at all, and I believe nothing was ever done to them from the time they were planted until they were taken up about the middle of August. On taking up the first root, seeing the tubers so numerous, induced me to count them. The following is the number found at each root—58, 62, 47, 33, 51, 41, 45, 43, 29, 30, 32, 57, 47. I took them up myself, and, I believe, every one of them: the sample very fine for the season. After they were taken up about six or eight days, they were looked over, and all diseased ones removed, which was nearly one-third of the bulk. This has been found the case in all our general crops that were in the ground so late as the middle of August.

"One kind, which we call the *Herefordshire Early Purple*, is a kind which we generally begin taking up for use about the second week in July, having done so for many years. Wanting the quarter for another purpose, these were all taken up by the 20th of the month, and stored away in the potato house, where most of them are at this time. In these we have not seen a

diseased potato at all this season, from the first to the present time.

"Another favourite, called *Hugh's Norbury Seedling*, a beautiful potato, allied to *Walnut-leaved Kidney*, and a great bearer, was taken up on the 1st of August, and scarcely any diseased ones have been found among these from first to last. The same observation applies to *Rylott's Flourball*—scarcely any diseased, and taken up at the same time. *Lyker's Oronian*, taken up at the same time, nearly one-third diseased. *Forty-folds*, about four bushels of which were taken up at this time, were much more free from disease than those which remained in the ground to the middle of August. Among these last taken up, full one-third were diseased. And in a quarter of *York Regents*, which were somewhat shaded by trees, upwards of two-thirds were diseased."

We may add, that Mr. Weaver entirely coincides with us in recommending planting none but early kinds, planting whole sets, and planting early.

COVENT GARDEN

THERE were many fine gardens in London once, but what Mr. Dickens calls "The Great Invasion" has so squeezed and circumscribed them, that, yielding to "the pressure from without," there is nothing left of them now but their names. We can imagine in our own minds what these old gardens were like, with their trim hedges, clipped "greens," and "allies artly devised in the same;" to say nothing of "the proper knots," as flower-beds, which would have supplied, with credit, designs for any "Knitting, Netting, and 'Crochet Book," even of the present day. We can imagine, too, what the old gardeners were like, with their long beards, Elizabethan ruffles, and high conical hats. These are what some people call "the good old times," but they have all passed and gone, and with them the good old gardens, and the good old gardeners, of London, leaving scarcely even a trace of where this one "grafted all sortes of trees," or that other practised "the right ordering of all delectable and rare flowers."

The only place of this kind, bearing the name and aspect of what it once was, is COVENT-GARDEN; and, as if unwilling to be banished from their former haunts, it would seem as if the ghosts of these old times still met and held their midnight revels there—for during the time that mortals sleep, there are produced, in this once fertile spot, such fruits, and flowers, and esculent plants, as would excite the incredulity of those who have not seen them. It would astonish some of our country friends who have never witnessed such a sight as is there exhibited every Tuesday, Thursday, and Saturday morning, to see the ponderous cabbages, the unmeasurable carrots, the enormous celery, the gigantic rhubarb, the snowy turnips, and the curly parsley! produced as if by fairy power, or coming from, we hardly know where.

It is of COVENT-GARDEN that we intend weekly to furnish the readers of THE COTTAGE GARDENER with a report. Our object shall be, to notice everything as it

comes into season, with such comments and remarks on the most important productions as we conceive will be interesting. In this way they will have a sort of calendar of horticultural produce, as well as a good indication of what to grow and what to avoid. These ghosts of whom we have spoken know well, and none know better, what is worth growing, and what suits best the taste of this great world of London.

During the past week there has been an abundant supply of all kinds of fruit. Apples are very plentiful, and range in price from 8s. to 6s. per bushel. *Fearn's Pippin* has made its appearance as gay and ruddy as ever; this is much grown by the market-gardeners of London, for, besides being a good market apple, it is a great bearer, and its fine, brisk, and sugary flavour render it suitable either for dessert or kitchen use. *Golden Pippins* and *Ribston's* are "in," and there are still a few *Kerry Pippins* left, but they are very small and very shrivelly. *Pears* vary from 8s. 6d. to 7s. 6d. per half-sieve,* and are also very plentiful; besides a number of nondescript varieties, there are several of the best sorts already in perfection. *Williams' Bon Chrétien* are going out; they are getting very yellow and very "sleepy;" these have been very plentiful this season, more so than that respectable individual, "the oldest inhabitant," ever remembers. *Hessel*, not *Hazel* nor *Hessel*, has also furnished a large supply, but is going out, and giving way to the *Autumn Bergamot*, *Beurré Capiaumont*, and *Marie Louise*; as these will be in season for some time to come, we shall have an opportunity of commenting on them on a future occasion. There are some very fine *Gansel's Bergamots*, from Guernsey, for which the epicure must give from 3s. to 5s. per dozen. The *Jersey Gratioli* has also appeared during the week; this is a most delicious pear, but very little known: everybody who wishes to plant six trees should have this one of them; we shall speak of it again. *Louise Bonne of Jersey* has been in for some time; this also is a very fine and very beautiful autumn pear, which ought to be in every collection; it may be said to come in between the *Williams' Bon Chrétien*, *Jersey Gratioli*, and *Marie Louise*. *Plums* of inferior baking kinds, such as *Muscle*, and other hedge varieties, are plentiful still, at about 2s. 6d. to 3s. the half-sieve. *Damsons* are also very plentiful, at the same price. Among the dessert varieties, *Coe's Golden Drop*, and some small shrivelled *Greengages* are all that are to be seen. Of *peaches*, the *Late Admirable*, and a few *Catherines*, are making their appearance; but we would rather have a good *Jersey Gratioli*, or *Marie Louise* pear, than all the *Catherine* or other late peaches the garden can produce. *Grapes*, both home and foreign, are plentiful. *Black Hamburgs* constitute the former, and fetch according to quality and colouring, from 2s. to 5s. per pound. The foreign are from 9d. to 1s. per pound.

Many fruits which are merely enumerated in the present notice, shall be treated of at length, as we have occasion to refer to them in subsequent reports. H.

* Half-a-Sieve contains three-and-a-half gallons.

FORSYTH MSS.

IN our last notice of *LIEUTENANT PATERSON* (vol. viii. page 378), he was at Norfolk Island, in the May of 1792, and there, and at Port Jackson, he continued until nearly the close of the century, but before that he had become Captain in the New South Wales Corps. He then returned home, but did not remain there long, for under the date of February 22nd, 1800, and from Port Jackson, there is this letter from

MRS. PATERSON TO MR. FORSYTH.

We arrived here on the 4th November, after a tolerable speedy voyage of less than five months, which was a fortunate circumstance for us, as the ship was excessively uncomfortable, and ill calculated for passengers, and besides very leaky. We put into St. Salvador, on the coast of South America, to rest, from which place, until we arrived here, we had constant gales and bad weather. In one of these severe storms Col. P. was nearly killed by a fall in the cabin, being very much bruised, and three of his ribs broken. He is now, thank God, quite recovered, and has been lately exploring the banks of the river Hawkesbury, principally for coal, which was not found just at the spot where he expected; but there is plenty in other situations. He was amply rewarded, however, for his trouble, by discovering many new plants, and in visiting the different settlers in that neighbourhood. The crops of grain those farms produce are wonderful, but, notwithstanding the fine country and climate, the colony is in a most wretched state, from bad management. An active, able man, is much wanted here, as Governor, and that soon, or I fear it will take a long time to bring it about again. I send this letter by Mr. Cover, one of the unfortunate missionaries sent out in the Duff. He is a worthy man, and can give a correct idea of this place, having been here above twelve months. He will also be able to give you every information respecting that unsuccessful mission. The cultivation of the vine in this country is very much neglected, from the two or three last seasons having failed. Fruit-trees, particularly apricots and peaches, thrive uncommonly well, especially the latter, which in general produces fruit the second year from the stone. Col. P. would have written to you himself, but is very much engaged in arranging regimental business to send home.—E. PATERSON.

He returned to the colony not only as Colonel of his regiment, but as Lieutenant Governor, and continued to retain that office until his final retirement. His last letter among these manuscripts is dated from Sidney, October 13th, 1800.

COLONEL PATERSON TO MR. FORSYTH.

Governor Hunter being about to quit this country gives me an opportunity of saying that both Mrs. P. and myself are in good health.

Since my arrival in this country I have had very little time to pursue my favourite amusement, what with the duty of the corps, and the constant watch we are obliged to keep over the United Irishmen that have been lately sent to this colony. We have discovered several plans that were in great forwardness to subvert the government, and to put every one to death that would not join them.

On a committee (to investigate the business), of which I was one, it clearly appeared that their plan was to have seized on a detachment of soldiers doing duty at *Panama*, in the time of Divine Service, and to have attacked us at head-quarters. We fortunately discovered their diabolical intentions the day before it was to have been attempted, and, from their observing our preparations, they did not assemble; but we found several of their ringleaders. Some of them have been punished, and a party of them sent to Norfolk Island.

There are three of our officers that return to England by this conveyance; one of them, Captain Johnston, is a prisoner under my arrest. As Governor Hunter would not allow a court-martial to try him in this country, the evidences are taken on oath, and sent to the commander-in-

chief. I shall be anxious to know the result. From all these circumstances you will easily conceive that my situation in this country is not very pleasant.

He retired from New South Wales in the spring of 1810, and among the deaths recorded in that year, we find this entry. "June 21st. At sea, on board His Majesty's ship *Dromedary*, Colonel William Paterson, Lieutenant-colonel of the 102nd regiment, F.R.S. Member of the Asiatic Society, and many years Lieutenant-Governor of New South Wales, from which colony he was returning to England in the command of the 102nd Regiment."

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

- BURY ST. EDMUNDS, Nov. 26 (Chrysanthemums). (Sec. G. P. Clay, Esq.)
 CALEDONIAN (Inverleith Row), Edinburgh, Dec. 2.
 HAMPSHIRE, Nov. 18 (Winchester). (Sec. Rev. F. Wickham, Winchester.)
 LONDON FLORICULTURAL (Exeter Hall, Strand), Oct. 12, Nov. 9, 23, Dec. 14.
 NORTH LONDON, Nov. 23, Chrysanthemum.
 SOUTH LONDON (ROYAL), Oct. 14, Nov. 11, Dec. 9, 16.

POULTRY SHOWS.

- BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
 BRISTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Marmont.)
 CORNWALL (PENZANCE), about a week after the Birmingham. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and F. H. Rodd, Esq.)
 DORCHESTER, Nov. 18th. (Sec. G. J. Atkyns, Esq., Dorchester.)

† For seedlings only.

PINE-CULTURE: THE HAMILTONIAN MODE.

We have, during the last few months, received so many queries, or heard inquiries about Pine-culture, from persons of moderate means, who wish to indulge occasionally in that luxury, and occasionally to make the fruit, by sale, pay the expenses incurred, that we think it will be but an act of justice to take up the subject in a step-by-step way; the dryness, or tedium, necessarily attending this course in the eyes of the experienced, will, we hope, be excused for the sake of the class alluded to. Too much generalisation befits not persons of this caste; they want the very alphabet of culture itself; and to make ourselves useful, we must, to use an apposite saying, "begin at the beginning."

As much confusion has continually arisen from a jumbling together the pot and the open-soil modes, we must, in this series of papers, confine ourselves to the open-soil, or Hamiltonian mode of culture, believing it to be the very best of all for the amateur; being the easiest to learn, on account of its extreme simplicity, and requiring so small an amount of labour and attention. It is somewhat fortunate that the subject should force itself at this period upon us, when, of all others, perhaps, the least advice is required in other affairs.

STRUCTURE FOR PINE-CULTURE.—We come here to the consideration of the form, the angle, or roof pitch, the glass, the interior fittings, &c., each of which will be handled in due course. Having much faith in our

friend Hamilton, whose long experience in this matter, to say nothing of his being the originator of this system, highly qualifies him to offer advice, we have written to him on the subject, in order to see if he is prepared, by subsequent experience, to confirm what he had previously laid down in his useful book. He has most kindly and fully answered the inquiries we had to make, and also permitted the use of his name, if necessary.

Mr. Hamilton has, within these four or five years, built a new house for his pine system; and it will be well to give a detail of its character. It is a span-roofed structure, running east and west, thus presenting a south roof and a north one. The pitch of the roof is three-and-a-half inches to the foot, the length of the house fifty feet, and the breadth fifteen feet. There is a walk up the centre, beneath the ridge, of two feet in width; a bed of five feet on either side, and a trench, or cavity, eighteen inches, front and back, for the piping. This house holds one hundred plants, and, according to friend Hamilton, each plant ought to produce one full-sized fruit annually, of some five to seven or eight pounds—to fix a weight for the purpose of enabling our readers to form a calculation. Of course, it will be understood, that whilst the weight here assumed would be too much for such as the Queen section, so, in like manner, will it be below the standard for such as the Providences, Euvelles, Cayennes, &c.;—thus much to obtain a clear view of the question. To return to the digressive point—the external character and dimensions of a house proper for this system—we come now to the mode of heating. "Each bed," says Mr. H., "would require two pipes, in order to equalize the heat at the roots of the pines; two would be far better than one of greater calibre, for it is not a high concentration of heat at one point that is requisite, but a steady and given amount equally diffused. Moreover, it will be seen, that in hot-water heating, although a circulation *may* be established in one pipe or tank, yet it would be necessarily sluggish; and a return pipe to the boiler ensures a lively circulation, in addition to the end in view—the equalization of the bottom warmth."

Thus much for bottom or ground-heat; now for atmospheric warmth, for which *special* piping is requisite. Mr. H. says there should be two pipes back, and two in front, that is to say, a flow and a return belonging to it. It will here be seen what value is to be attached to the idea of growing pines out-of-doors, in Britain, like so many artichokes. When such is well accomplished, rents will assuredly rise, for some thousands of acres will be needed for vineyards and pine-gardens, for the demand for both will be enormous.

Thus it will be seen, that eight parallel lines of piping are considered requisite by Mr. Hamilton in such a house, and if pines are to be grown in the highest degree of perfection of which they are capable at any season, we join in Mr. H.'s opinion. The beginner in pine-culture must here observe, that the pipes to heat the soil are no more than an equivalent for the loss of tan, or other fermenting material, so that such may be fairly left out of the question of expense; for although, in the event of tan-yards being close at hand, the bottom-heat from that source might be obtained at a cheaper rate, yet, when the extra labour and uncertainty are taken into consideration, a certain loss in the end may be counted on. When tan has to be drawn half-a-dozen miles, we consider the proceeding most preposterous, according to the old adage, "penny wise and pound foolish;" those, however, who do not care about winter-pines, but would rest content with a good lot of such as Queens, Providences, and Euvelles, from June to October, may succeed with one-half of the piping for warming the air of the house. The bottom-heat piping, nevertheless, the same as before stated.

To return to Mr. H., he says, "my boiler is at one

end of the house, in the centre, and outside. Immediately opposite to it inside, I have a reservoir, or iron pan, of about two feet in depth, by half-a-yard square, and this has six pipes attached to it." It will be here seen that the reservoir is but a centre, common to all the pipes, which all take their flow here, and here deliver their return. This, we suppose, is partly to save the expense of what are termed elbow-joints, and other complex affairs. In this description we are not quite sure that we understand Mr. H.; if, however, any error should creep in, we shall soon get it rectified. Mr. H.'s words are these, "the reservoir will require six pipes attached to it, so that the pipes which heat the air of the house can be plugged or stopped at any time, when only bottom-heat is requisite. This answers much better than valves." We saw Mr. H.'s house about twelvemonths since, and witnessed his thus turning off the flow, which he did in an instant, by merely thrusting a roll of coarse cloth into the advance pipe.

Having so far followed Mr. Hamilton's plans pretty closely, we may be allowed a few comments as we proceed. In the first place, it does seem matter of astonishment, that a practice so simple, and consequently economical, so much in accordance with the habits of the pine, as stamped in indelible marks by nature's own impress, should not before this have become more general. What said Pope?

"Truths would you teach, and save a sinking land,
All hear, none heed you, and few understand."

And so it has ever been with inventions which carry a great amount of simplicity in the face of them; they pass unheeded by the majority of minds for want of the appearance of that degree of elaborateness, which, in fact, is the bane, instead of the true merit of most inventions. In speaking thus, we do not wish it to be inferred that the Hamiltonian mode ought to supersede all others; by no means. There are cases in which the pot mode may be more desirable, inasmuch as the pines may, with facility, be removed to a cool room in the pot, when necessary to retard them for particular purposes; and, indeed, it is still a question whether the Hamiltonian mode is equally applicable to all kinds: that it suits the Black Jamaica, or what is termed Montserrat by some, is undeniable. This pine, at least, seems quite at home under this treatment; and as a pine for general use, and especially for winter, it will be long, we think, before it is superseded; albeit, the rising popularity of the Cayennes threatens hard. We may here offer an opinion about the form of the house, which, indeed, is the first thing to begin with. Mr. H., it has been seen, is an advocate for span-roof houses, running east and west. Now, we really do not see why this mode should hold such a strong position in the minds of our practical men. "Speak well of the bridge that carries you safe over," is a trite maxim, and doubtless will apply to the case in hand; but a too stiff adherence to established modes is but too apt to assume a pertinacious character, and to prove a barrier to progression, which, in the most unmistakable manner, is the order of the day. Why not north and south? Pines, it is said, occasionally enjoy a little shading for three or four hours during bright and hot days, and the mid-day sun can very well be dispensed with on such occasions. But to build span-roofs with a southern facing, is to set a trap to catch all the mid-day rays possible. Sir Joseph Paxton, breaking through the trammels of prescription long since, shewed by his ridge-and-furrow-roof that there were more ways than one of building houses. The ridge-and-furrow of course is simply a multiple of the span-roof, with an eastern and western slope, or in other words, a morning and an evening side. Now, if it can be shown that a half-day's sunshine will suffice for pines, whether that half-day be an eight to twelve o'clock affair, or a twelve to four o'clock, why the rest of the question

would seem to follow as matter of course. We have talked over this subject with several first-rate men at various times within the last half-dozen years, and have almost invariably found them with a latent desire to break from southern slopes, "willing to wound but afraid to strike." Not every one, however, who can conceive a project carrying promise of advance, has the power to shew forth his conceptions in real bricks and glass.

To sum up, then, as far as the roof question is concerned, we may be permitted to offer our impression, which is, that it appears tolerably certain that the southern slope may be departed from in the case of pines, and exchanged for a morning and evening side, as in a span running north and south, as to its longitudinal direction, or, indeed, to some other points of the compass, as the case may be; and that much latitude may be fairly given in this respect, the pinery giving up a point occasionally to existing circumstances, perhaps as an adjunct to the villa or to other structures.

But if a span-roof running east and west *must* be adopted, we think that some little change in the modification of the interior fittings might be resorted to with advantage. For instance, it is a matter of principle that an equality of light should be enjoyed by the pines; those on the north side of the walk should have an equal chance in that respect with those on the south bed. To effect this, the bed on which they stand must necessarily be somewhat higher. Admitting, then, a span-roof perfectly equal in dimensions as to the exterior, we would have the back bed half-a-yard, or nearly so, higher than the front, or, if you please, the front bed half-a-yard lower; all this amounts to the same thing. In such a case, the first and ruling principle would be, to pay a due regard to the ordinary ground level outside; the front bed should be so placed as to present every portion of the foliage to the solar rays, even in the depth of winter. This done, the lower the whole structure was sunk below the ordinary ground level the better, according to our ideas; inasmuch, as the farther this point is carried out, the more the structure would prove self-protecting—a great matter in economising fuel; and every gardener knows that the use of fuel in the dull winter months, or, indeed, at any period, is a necessary evil, to give it a hard name. But not only is a proper economy involved in this arrangement, but the very health of the pines.

There is still another consideration as to the roof question; and, as we are simply throwing out hints for the consideration of those about to embark in pine-culture as a profitable investment, it will be well, perhaps, to offer suggestions with freedom, and to make our comments keep pace with the order of the subject. In pursuance of this, then, we would say, if a span-roof, running east and west—are both sides of the span obliged to be equal? In thus widening the question, we shall give a free scope to a full examination of the whole subject. As the south front is too apt to admit of too great an amount of the solar rays, why not make it less in width, say as two to three? Many other remarks might be offered on the character of the roof, but as they interfere too much with the line of our subject, we must postpone them until we can offer a chapter on roofs. The structure, then, should be so far sunk below the level, as that the front sill of the sashes is but above that level; other parts will follow as matter of course. As to glass, Mr. H. has omitted to mention it in his correspondence; but before closing this subject, we will take care to ascertain this, which, with anything else that may arise, together with omissions, &c., will be introduced at the conclusion. It seems probable, in the event the house having an east and a west roof, that the British sheet would be most eligible; and as to a south and north roof, rough plate on the south, and

sheet on the north; however, we have no experience of the rough plate.

As an encouragement to those about to venture on the Hamiltonian system, it may be observed, that Mr. H. has had it in operation for many years. At first, in a poor, low, contracted, and rough-looking house, which, without the noble pines it contained, would have been but a sorry affair. Such, however, was his success, that his employer empowered him to build a handsome new house to his own liking, and here the system may be seen duly carried out. We now give an extract, in concluding *this paper*, from Mr. H.'s letter now on the table: "The gardener of H. Marsland, Esq., of Woodbanks, is going by my instructions. He has three plants of the Montserrat (?) with three fruits each, and there is every probability of the nine fruits weighing thirty-three pounds." R. BRINGTON.

(To be continued.)

YUCCAS.

In these days of plant-growing, for fame, for gold or silver medals, or for hard cash, such old plants as Adam's needle, and the like of it, that are thought beyond the art of the specimen grower, are left to nature, or rather are taken from her care, and then turned adrift to take care of themselves as best they may. *Yuccas* will grow or live in any kind of soil, if it is not too wet, and when one flowers any thing beyond the common run, it is reported in the periodicals as something strange, like the flowering of the American Aloe, as it is called, and no one turns his attention to the improvement of the race, or, if he does, he thinks there is little merit in saying much about it. Hence it is, that if you wish to flower a *Yucca*, and would learn the easiest and best way to go about it, you may look through all the authors, from Phillip Miller to the last number of *THE COTTAGE GARDENER*, and not be much the wiser. Indeed, I do not remember a single author who has given a full account of the propagation and cultivation of *Yuccas* as a class, except Mr. Gordon, of the Horticultural Society's Garden, at Turnham Green, and that was seven years ago (*Gardeners' Chronicle*, 1845, p. 381). Since that time, Mr. Gordon has so far improved on his own recorded practice, that his success surprised me the other day on looking over the garden. Like most other gardeners, I never dreamed that *Yuccas* are as susceptible of improvement, at the present day, as the Pine-apple plant was twenty years ago; but so it is, without any shadow of a doubt, and not only that, but it may be so managed as to become a regular competitor on the exhibition tables.

As far as I can make out, we have only one instance on record, in which a *Yucca* was exhibited in a pot for a prize, and that was in Fifeshire, in Scotland, some years ago. The flower-stem of this plant rose seven feet from the pot; the plant was exhibited in September, and was only struck from a cutting the March before. We know that some people run away with an idea that the *Yucca*, and the American Aloe, flower only once in a hundred years; others are as far wrong, who assert that a *Yucca* will flower regularly every year, after it once comes to a flowering age. The opinions about this age are also as far from the truth as the rest of the story. Some will tell you that five or seven years will bring it into a flowering state; others say ten years; whilst a third says fifteen, and a fourth goes as far as twenty. All this is in black and white, in my own library; but there is a *Yucca* in the next parish to me, Long Ditton, which did not flower for twenty-five years after being planted, and it might have been two or three years old at the time. It is now in bloom for the third time, and there were just five years between each time of flowering.

The truth is, however, that the flowering of *Yuccas* depends on soil and situation, rather than on certain or uncertain dates.

Yucca gloriosa is the one we hear most about, and this plant is a native of the sea-shore, in the southern states of North America, and although it lives with us in almost any soil or situation that is not absolutely wet, it prefers the sea-coast, a full southern aspect, sheltered from all other points, the best friable loam, and a rock, or chalky bottom perfectly dry. In such situations in Devonshire, Cornwall, the Isle of Wight, and the South of Ireland, it blooms every year as well as it does in Virginia or South Carolina.

At its full age, it is not proof against those very severe winters we sometimes experience in this country. For instance, the great celebrated tree *Yuccas*, in the Oxford Botanic Garden, with stems five feet high, clear of leaves, and which Mr. Baxter, the no-less-celebrated curator, successfully transplanted, were cut down to the ground by the frost of the winter of 1837-38, but they sprang again from the roots, while plants of four or five kinds of them, not nearly so large or ripe, as we may say, stood out in Kilkenny without any protection whatever. It has been observed, that more *Yuccas* flowered with us in the hot summer of 1826 than in any one season before or since. In that year, a *Yucca gloriosa superba*, the best variety, with the purple on the back of the petals, flowered for the first time, after being twelve years planted, and two years when planted in a nursery at Windsor. The top of the flower-stem was twelve feet six inches from the ground; the flower-stem itself being upwards of nine feet; out of this stalk grew forty-seven side branches, eighteen inches and upwards in length, and each produced from twenty to thirty flowers, or probably 1,100 flowers in the whole. Who would not envy so noble a specimen of this much-neglected plant. "But stop a while"—another individual of the same species, whose girth, at fifteen inches from the ground, was 25½ inches, produced six flower-spikes at the same time, on which was counted in one day no less than 2,704 flowers. But the most splendid specimen of *Yucca* on record, under cultivation, is a plant, or rather tree, of the Aloe-leaved species, of which the Countess Dunraven sent a drawing to Mr. Loudon, from the gardens at Adare, in Ireland. This drawing is given in many of Loudon's works; in the *Vegetable Kingdom* of Dr. Lindley; and in other works here and on the continent. This *Yucca* was twenty-eight feet high; at ten feet from the ground the trunk girthed seventeen inches, and at twenty feet it divided into "six massy branches, each terminating in a pyramid of flowers." Notwithstanding such instances, a *Yucca gloriosa* that is from three to five feet high in the stem and leaf, with a flower-stem of about equal dimension, would be a very fair specimen to pride oneself on, after a few years cultivation, on the principle advised by *THE COTTAGE GARDENER*.

It is very strange that no writer has sufficiently admired the *Yuccas* as fit plants to introduce into geometric flower-gardens, for which they are admirably suited, when reared with the sole view of that kind of furnishing; and no less so, that some of our great architects—Sir Charles Barry, for instance—have never thought of them as architectural plants, as one may say, instead of the great aloes which Sir Charles, at any rate, is so fond of rearing up on pillars and corners in his elaborate designs. I could name more than one place in which Sir Charles Barry introduced, not only an aloe or two, but aloes in great numbers, as architectural ornaments, such aloes being cast in lead, and placed in stone, or composition vases, after being daubed over with a vile light-green colour, cockney fashion; and these aloes, too, anything but real imitations of the natural plant. Add to all this, a sharp north-easter, the thermometer

three parts down to zero, and a lot of gardeners sliding on the ice-clad lake, or carrying a cabbage on a long pole, looking over the hall, the castle, or the mansion, decorated in this pseudo style, and you have anything but a picture true to nature or to art.

Although the *Yuccas* have been cut down to the ground by some of our severest winters, they are yet sufficiently hardy to be allowable, in effigies, as accompaniments to architecture, without outraging our ideas of means to an end; at any rate, they are highly appropriate for planting in corners, angles, or other spare places in regularly laid-out gardens, as any one may now see, looking at the new plantation of *Yuccas* in the American garden of the Horticultural Society of London. There is not such another batch of *Yuccas* in the three kingdoms—that is, so fit for planting as ornaments to a flower-garden.

People far off in the country, who knew the old arrangement of this garden, will recollect a large mass of *Yuccas* which stood, for half an age, not far from the great and celebrated *Glycine*, where a short piece of wall projected from the long conservatory wall on which the *Glycine* is trained. All this is now altered: the cross wall is taken down, and the *Yuccas* are removed; so that the whole of the conservatory wall, from the clock-room to near the council-room, can be seen at one glance—an immense improvement. Some of the *Yuccas* look as old as if they were the very plant from which Adam took his needle, and some of them had I know not how many heads. But now, in their new bed, they are all single-headed, and look as young and thrifty as Mr. Errington's pines which he struck from his best suckers last March, and much after the same style of growth, without any visible sign of a stem to any of them. Many of them promise to flower next year, and that in a manner as far superior to the usual run of *Yuccas*, as the present state of pine-growing is from what it was when Mr. Errington first went into Cheshire; and it is in this very style that they will soon be seen in our best flower-gardens all over the country. But it is sad news to us who are poor, and are members of this Society, to learn that they will not be able to supply us with a single *Yucca* from our own garden, at least, for the next four years, for this reason, that the whole stock has been divided to the last head and sucker for the new plantation, and that the young plants are in such a vigorous state of health, that one can hardly look for a sucker from any of them before the time specified. We must all trudge to the nurseries; meantime, I shall keep on hammering at the subject until every plant of *Yucca*, in every nursery in the kingdom, is made the most of, like those in the Society's garden; and who will venture to say there is nothing new under the sun when I describe the perfectly new way by which the old *Yuccas* in this collection have been renewed to the age of mere suckers?

The more usual way of increasing this family is from suckers which rise from the roots, and from divisions of the head that are branchy; these are slipped off in the spring, and some of the lower leaves being removed, and a few days allowed for the wounds to dry, the suckers are either planted out in the open ground, in some light soil, where they will root during the summer, or they are potted in a light compost, and then plunged in bottom-heat, where they will root much sooner. But when neither suckers nor side branches are produced, Miller, the only author on whom I can lay my hands, who has recommended the plan, directs the head to be cut off, taking a portion of the old stem with it, potting this, and applying bottom-heat to it, when it will soon root; "and this cutting off the heads will occasion the stems to put out suckers, which they seldom do without until they flower; so that by this method the plants may be obtained in plenty." This is the method which

Mr. Gordon adopted with the tops of all his old plants, after divesting them of all side branches. Suckers and offsets he formed into one lot, and all the tops into another, taking off long pieces of the old, dry stems along with single heads; but, instead of nursery rows, and potting for hotbeds, he removed the whole at once to his new plantation, and planted them in as novel a way as his success is complete. Indeed, I never saw anything answer better; formerly he recommended a hole for them, a foot deep and two feet across, to be filled with a good compost; then to plant a sucker, or a well-established plant in the middle, and to press the soil firmly round the stem; on this occasion, however, he tried a new experiment. After opening the holes, he made a compost of half clay and half cow-dung, and stuck in his plants so that the bottom leaves were just within the surface, and then he rammed the compost round the stems as hard as he was laying the foundation for a pyramid; and if the plant was at all top-heavy, he put a stone on the top to steady it still firmer. The cow-dung kept the clay from drying too hard for the new roots to work through, while the clay was yet firmer than any loam could be for steadying the plants; and as soon as roots were made, there was a rich feast for them to begin with, and the plants now show that they took advantage of it.

I have often seen young pine-apple plants healthy enough to gladden the heart of any old gardener, but I never saw plants more healthy, or better-looking in their way, than these *Yuccas*.

And now, for THE COTTAGE GARDENER: just look round and see if you have a starving *Yucca* anywhere about the garden, with a crooked stem as hard and dry as a May-pole, and if it has ever flowered, the chances are that it has more than one division in the head; all the better; every division of the head will make a new plant. You must now trace where the head divides, and strip off the leaves below that point; then it will be easy enough to slip off every division but the one which seems the most central, this must be left to go with eighteen inches or more of the hard crooked stem to form your premier plant. Never think, for a moment, of taking up the roots, and of transplanting the whole as it is, for that would spoil the whole experiment; you cannot force blood through dry bones, or sap from the old roots up through a stem as dry as a cork; but get young fleshy roots from the very bottom of the leaves, and as far down the piece of stem as they like to come, the sap will flow vigorously, and the leaves will soon be as green as leeks, and as stiff as pokers; and if you plant them as above, and arrange them so as to be in pairs, no matter how far apart, there are no plants that will more stamp the character of a terrace garden, the front of a box terrace, or, indeed, any geometric figure.

At the end of next March will be the best time for all this; *Yucca gloriosa* *superba* the best plant to use—the one with the purple back to the white flowers, and *Yucca draconis*, or *recurva*, or *recurvifolia*, or *acuminata*, for it goes under all these names, is the next best. This kind turns back the leaves in the middle, looking as formidable as a dragon, which gives meaning to the second name; but *recurva* means that kind of turning in the leaves. The third best kind is *filamentosa*, and it has no stem, but it flowers very freely, and is easily known by the white threads or filaments which hang from the edges of the leaves. There are many more kinds, they say as many as thirty, but these are enough to begin with in a small way. If I had a long walk with grass on both sides, I would make an avenue of these *Yuccas*, planting them ten or twelve feet apart, and six feet from the walk; a more ambitious man, with a large stock of plants in the reserve garden, would try to have every other plant in bloom along both sides at once, and the other half the year following. D. BEATON.

THE GREENHOUSE.

I SHALL shortly advert to several plants, to meet the inquiries of several subscribers.

CANTUA DEPENDENS.

"I have a plant twelve months old; should I let it get quite dry in winter, or how manage it?" This plant may be treated, in many respects, as a fuchsia, but it will not stand so much *dryness* in winter, because its stems are much more slender, and less succulent. Even fuchsias, though rejoicing in a rest in winter, are frequently injured by being kept too dry at that period, especially when it is intended to preserve any part of the old stem. One of the finest plants I have seen of the *Cantua*, was, in my opinion, injured in a similar manner. It had been grown freely during summer in an intermediate house, and was beautifully branched all round from a central stem. It was then put in an airy place, in autumn, to ripen the shoots, and kept cool and dry in winter; but in spring and summer it only showed a few flowers from the strongest and terminal shoot. I think one of two courses should have been followed:—to have kept the plant slowly growing without a check, and waited for the sunny-days of spring and an airy position to get masses of bloom from the end of the shoots; or, what I should prefer, with a strong established plant, allow the wood to get ripened before autumn, give the plant a temperature of about 15° in winter, with no more water than would keep it just moving; then, prune it back considerably in spring, place it in a warmer place, or the closest and warmest end of the same house; re-pot, if necessary, when the young shoots are one inch in length; shade, syringe, and encourage with suitable moisture, and, if possible, additional heat, and an open airy position, and the stiff, but luxuriant shoots will furnish you with its beautiful dependant fuchsia-like flowers. The plant will thus require similar management, but a little *more* care than a fuchsia.

Propagation.—The small side-shoots, formed after pruning back, when a little firm at their base, and from two inches in length, make the best cuttings. Take them off, if possible, close to the old stem, wounding it as little as may be; use a lancet-like knife for cutting clean across at the base; remove a few of the lower and small leaves, and then insert the cuttings in silver-sand, over sandy-peat, in a well-drained pot, cover (after watering) with a bell-glass and place any where where shade can be given, and a temperature secured a little higher than the parent-plant previously enjoyed.

Potting.—On getting a small tiny plant, you may continue giving successional pottings as the pot gets filled with roots; but after twelve or eighteen months growth, when the plant is pretty well established, one, potting, as instanced above when growth was progressing, would, in every respect, be preferable.

Compost.—Sandy peat, a little turfy loam, and broken pots, for the first potting, increasing the loam in subsequent pottings. When the plant gets established, let the loam be nearly one-half, with a portion of charcoal, broken pots, and dried nodules of cow-dug.

Watering.—Give liberally when the plant is growing freely; lessen as autumn approaches; just see that the soil is not dry in winter; apply weak liquid-manure when the first flower-buds peep, and let the water be aerated, and always as warm, rather warmer, than the temperature in which the plant is growing.

Temperature.—40° to 45° in winter, 50° to 55° in spring, 60° in summer, 50° to 55° in autumn, with from 10° to 15° rise for sunshine, during which, in spring especially, the syringe may be used.

Insects.—Keep free, is the grand thing; fumigate for fly, use sulphur for the spider, but *carefully*, as the plant is very sensitive to brimstone.

DEUTZIA GRACILIS.

It is complained that "this will not grow." It is, however, one of the prettiest things lately introduced; but I suspect it always will be a plant of *slow*, as well as slender growth. A correspondent may expect his plant, four inches high, to produce its pretty white flowers next March, or the beginning of April, if he keeps it all the winter in a common greenhouse. After satisfying himself with seeing the first flower, I would recommend every flower-bud to be removed, and the points of the shoots to be stopped, and the plant placed in an airy, warm corner, to encourage growth. Not that the plant *absolutely* requires heat, for I believe, ultimately it will be found that it is as hardy, or nearly so, as *D. solibra*; while that, again, in many places, has proved itself as hardy as the Philadelphia, or Mock Orange. So long as *D. gracilis* is rather scarce, and in a small state, it would be folly to place it in shrubbery, or even at the foot of a wall, though, no doubt, ere long, it will be placed in both positions. At present, and especially when in a small state, a dry, cold frame, or pit, or a common greenhouse, will be the most suitable winter quarters. It produces its flowers one season on the slender, well-ripened shoots produced in the preceding; this must be kept in mind when growing and pruning. It grows so slowly, that little pruning, farther than nipping the points of shoots and thinning the young ones, will be required. If these young shoots are well ripened in autumn, extra heat will bring the flowers out any time in winter, especially after Christmas.

Compost.—Equal parts of sandy peat and loam, when young, increasing the loam, and adding leaf-mould and cow-dung as the plant gets older and larger.

Watering.—Give liberally when growing and flowering; lessen the quantity in autumn, and just see that the soil is moistish in winter. In bright days, at the latter period, it will be better to lessen evaporation, by a dusting over the top with the syringe, in preference to soaking the roots. On this account, many small plants, in little pots, that require rest in winter, are best kept when plunged in, and the pots surfaced with moss. The roots are thus kept easily in an equal state, neither wet nor dry.

Propagation.—Cuttings of ripened one-year-old wood, taken off in autumn, and inserted in sandy soil, under a bell-glass or hand-light, in a cold-pit, the glass, however, not being pressed close down; or small side-shoots in spring, when 1½ inch long, inserted under a bell-glass, and placed in a temperature a few degrees higher than that of the plant from which the cuttings were taken.

DEUTZIA SCABRA.

This, though an old plant, is still a most interesting one, whether used for the greenhouse or the open shrubbery. It is easily propagated by young, stiff, side-shoots, under a hand-light, in a shady place, in June; but easier still, by inserting ripened young shoots in a shady, sandy border in autumn, just as you would do a currant cutting. If grown in pots, and taken into the greenhouse, it will bloom in the end of March and in April. If wanted earlier, it will stand a gentle forcing. Few things are more lovely than its shoots, from two to four feet in length, covered with its beautiful snow-white flowers. When done flowering, and the young shoots are growing freely from the bottom, all the old shoots should be cut away, and the young ones thinned to the required number; five or seven being a good number for a large pot. When growing, the plant will relish manure waterings. Ripening the young shoots is the great thing to ensure fine flowering. Treat it in every respect as you would a favourite raspberry-bush. A good loamy soil suits it.

WEIGELA ROSEA.

This, when treated as a greenhouse plant, may be managed almost in every respect as the above. It seems quite as hardy as any shrubby *Philadelphus*, or *Honey Suckle*. I never succeeded so well with it as with the *Deutzia*, though certainly it is worth a little attention for decorating a house in the spring months. It blooms chiefly, not on last year's shoots, but on those of the current season, coming from well-ripened buds on last season's growth. In pruning for blooming, therefore, we must take the *vine*, and the *rose*, and not the *raspberry*, as our example. The bush character is thus easily produced. Both the *Weigela* and the *Deutzia* may now be lifted carefully, and potted, and if the pot is plunged in any material containing a little heat, while the top of the plant is exposed, the rooting process will be encouraged, and the plants may afterwards be set in the greenhouse, or forced in spring.

ESCALLONIA MACRANTHA.

This, "with a stout stem, eighteen inches high, and nice side branches, four inches long," may be expected to yield you a few of its pretty flowers next season. If, however, a fine specimen is your object, I would not be too anxious for many flowers. Keep it in a moderate greenhouse during winter, and place it in an airy cold pit out-of-doors in summer. Use rather more peat than loam at first, increasing the loam by degrees. The plant, when two or three feet in height, if a young stock has been secured, might be ventured against a conservative wall. Stubby young shoots will strike under a hand-light in summer. Younger ones will strike more quickly at an earlier period; but they must be inserted in sand, over sandy-peat, covered with a bell-glass, and kept in a frame or pit.

CEANOTHUS RIGIDUS.

This, "nine inches high," can hardly be expected to bloom next season, nor would it be desirable, though the species or variety will bloom when in a small state. This and *dentatus*, from their stiff habits, are amongst the best of the semideciduous kinds for greenhouse decoration. Like others, they chiefly bloom on young shoots of the current season's growth, proceeding from well-ripened buds of the former year. The plant should, therefore, be kept moving, and no more, during the winter. The young shoots should be cut back to the lowest bud in spring, or nearly so, and this will throw more strength into the young shoots. A warm corner in the greenhouse will be the best place for them until May, then, a cold pit in summer, and full exposure in autumn, defending the plants at the close from heavy rains and incipient frosts. Cut off the greenest part of the shoots in winter; keep the plants cool then, and neither wet nor dry. The increase of heat and sun-light in spring, and the necessary increase of moisture, will give an impulse to the vegetative powers, and young shoots will be freely produced; which, if the plant is old enough, and the wood matured last season, will yield you charming blue flowers in summer. These young shoots, taken off close to the stem when from two to three inches in length, make nice cuttings when inserted under a bell-glass, or hand-light, in sandy loam, with sand on the surface. The pots for plants must be well drained, and then loam, with a little sand and peat will grow them well. Though ornamental for a cool greenhouse, a conservative wall, protected with a glass case, would be the best position for this and the greater part of the species that did not require a tropical temperature.

MITRARIA COCCINEA.

This has as pretty a scarlet tube as any *Gesnerwort* of them all; but, unlike the most of the group, instead of soft succulent stems and large leaves, it is a compact

little shrub, with small neat foliage. The first time I saw it, visions of flower-beds of it flitted before me. These I have not yet seen realised, and, perhaps, the flower droops rather too much for the purpose; but, as a hardy greenhouse plant it will be of great use in spring and early summer. I am not aware that it has yet been tried out of doors. It will grow nicely in rough peat and loam, and, after it is some size, will stand in a cold pit, or out-of-doors in summer. Fibry peat and sandy loam, rough in proportion to the size of the shift given, will grow it well.

Little pruning, farther than nipping the point of a strong shoot, to produce uniformity of growth, will be required. The pots should be well drained, and about a seventh part of the compost should consist of broken pots and clean charcoal. With good drainage, waterings will be required freely in the growing and blooming season, decreasing as the end of autumn approaches, and giving it but seldom in winter; the temperature in the latter period, with air, at all suitable times during the day, may range from 38° to 45°, allowing a rise for sunshine. I have no doubt the plant would do well near a conservative wall, especially if furnished with a glass-case. Stubby, half-ripened shoots will strike quickest under a bell-glass, when having a slight rise of temperature, shade, &c. Older cuttings will require less trouble, but more time.

R. FISL.

CONIFERÆ.

(Continued from page 398.)

CUNNINGHAMIA SINENSIS (Chinese Cunninghamia, or Broad-leaved Chinese Fir).—Named in honour of its discoverer, Mr. James Cunningham, by L. C. Richards, a celebrated French botanist. It was originally named, by Mr. Salisbury, *Belis jaculifolia*, and by Mr. Lambert, author of a Monograph on Pines, *Pinus lanceolata*. It is the only species yet discovered. Very ornamental, but too tender for the northern parts of England. In Devonshire and Cornwall, and even in Gloucestershire, it has as yet withstood the severity of the climate. No doubt, in many parts of Ireland it would thrive well. It is a very ornamental tree, rising to the height of fifty feet in China and Japan. It is as yet very rare.

CYPRESSUS (Cypress).—This genus contains an assemblage of trees and shrubs highly valued for their beauty, and well adapted to ornament the pleasure-ground, or form beautiful objects in the Pinetum. Their style of growth, generally upright, and densely clothed with branches and foliage of a pleasing dark green, in some instances, and light green in others, renders them exceedingly beautiful objects. Many species were known and highly valued by the ancients. Pliny mentions a Cypress at Rome which fell in the time when Nero was Emperor, and was judged to be as old as Rome itself. Five hundred years ago a Cypress was planted on the grave of the renowned poet Hafiz, and is yet alive, a living monument to the memory of the poet. There is a remarkable Cypress at Lomna, in Italy, which has attained the height of one hundred and twenty feet, and is more than twenty feet in circumference at the base of the stem. The use of the Cypress as a memento of the departed in cemeteries is well known; even to this day it is used for that purpose in various parts of the Old World: the far-famed Funereal Cypress was seen by Lord Macartney in China, in the "Valley of Tombs." All these particulars recommend the plants of this genus to the peculiar notice of the antiquarian, the scholar, and the man of taste, as well as to the owner of pleasure-grounds, the planter, and the nurseryman. Even the name is interesting, being said to be derived from Cyparissus, a handsome youth of the Island of Cœos, who was, according to heathen mythology, changed into

a Cypress; though some authors think the name is derived from the Isle of Cyprus, where one species abounds.

C. CORNEYANA (Mr. Corney's Cypress).—China. A very handsome species, of an elegant drooping habit, not much known, but well adapted to ornament either a small or large garden. Very scarce.

C. FASTIGIATA of Decandolle (Common Cypress).—This species is extensively spread over the South of Europe, Greece, Turkey, and Asia Minor. It is the Cypress of the ancients. It is the species so often referred to by Homer, Virgil, Ovid, and Lucan, in their poems. The wood is remarkable for its durability. For avenues, it rivals the Junipers and the Arbor Vitæ, associating admirably with the balustrade of a terrace-garden. It is useful, also, to break the profile formed by round-headed low trees. It is perfectly hardy, cheap, and plentiful in the nurseries. There are two varieties, one named *Trifoliata*, from resembling an Arbor Vitæ, and *Variegata*, from its foliage being variegated.

C. FUNEBRIS (Funereal Cypress).—This species has been already referred to, as having been seen by Lord Macartney, and it was noticed also by Sir G. Staunton; but we are indebted to Mr. Fortune for introducing it to this country. He published an account of it in the Horticultural Society's Journal, where he describes it as "a noble-looking fir-tree, about sixty feet high, having a stem as straight as the Norfolk Island pine, and branches drooping like the weeping willow. The branches grow at first horizontally with the main stem, then described a graceful curve upwards, and drooped again at the points. From these main branches, others long and slender hung down towards the ground, and gave the whole tree a weeping and graceful form. The form of the tree was very symmetrical, and reminded me of some of those large and gorgeous chandeliers which one sees in public halls in Europe. It has a most beautiful and striking effect upon the Chinese landscape." Perhaps the largest stock in Europe of this favourite Chinese tree is in the nursery of Messrs. Standish and Noble, at Bagshot. We saw them on a visit there already alluded to in writing on the *Cryptomeria japonica*; but the largest of them has not as yet assumed the drooping form. Hitherto it has proved perfectly hardy, and is so plentiful, that nice plants, nine inches high, may be had for 2s 6d, or even less, if a quantity is taken.

C. GOWENIANA (Mr. Gowen's Cypress).—Named in compliment to Mr. Robert Gowen, Treasurer of the London Horticultural Society. This is said to be a low shrub or tree, of some ten feet or fifteen feet high in its native country, California; but, from what we have seen of its quick growth, it must in this country eventually attain a much higher altitude. An interesting, upright-growing species, with very bright green foliage.

C. HORIZONTALIS (Spreading Cypress).—A native of the South of Europe, but perfectly hardy in Britain. Described by Du Hamel as a variety of the Upright Cypress, with the branches spreading out at right angles from the stem. It is like the species in every other respect, and forms a handsome tree forty feet high.

C. KNIGHTIANA (Mr. Knight's Cypress).—The origin of this beautiful species is unknown. From the plants that we have seen of it, it appears sufficiently distinct; it is allied to *C. torulosa*, and, like that species, is rather tender in the northern parts of Britain. T. APPLEBY.

(To be continued.)

ROSES ARRANGED ACCORDING TO THEIR COLOUR.

A CORRESPONDENT, who signs himself "A Derbyshire Subscriber," writes for information about selecting

Roses, so as to have only such as are distinct in colour. He says, "The great objection to these flowers is their sameness of colour. I want to get all the really and strikingly distinct shades, from the darkest crimson to pure white, and thence again to bright yellow." Now, we think this idea a good and useful one, and, as our correspondent suggests, one that would be useful to others, as well as himself, that are about to purchase roses. We, therefore, shall draw up a selection of Roses possessing the property of colour in high perfection. Suggestions of this nature from our readers are always useful; they lead the writers for THE COTTAGE GARDENER to enter upon such subjects as our subscribers wish for information upon, and, by that means, diffuse the knowledge required. Correspondents, therefore, wanting information suitable to their particular locality, need not fear writing for it; but they ought always to send full particulars as to locality, soil, and subsoil—whether the soil is high or low, whether well-drained, and any other particular they may think necessary to be known, in order that the answer may contain the fullest instruction in every point.

To return to our subject of selecting Roses, our correspondent wishes to combine roses for the open border and roses for a wall, or trellis, in the selection. This is somewhat difficult, as there are not so many climbing roses of distinct colours as there are in those that are not climbers. The list may appear somewhat long, but our correspondent, or others, may easily shorten it in giving their orders. The varieties are all good, distinct, and will, we believe, come true to the colours indicated.

T. APPLEBY.

COLOUR: DARK CRIMSON.

SUMMER ROSES FLOWERING IN MAY, JUNE, AND JULY.

FOR THE OPEN BORDER.

FOR WALLS AND TRELLISES, OR PILLARS.

Provence.

Sylvain

Moss.

Colina

Countess de Noc

Cramoisi foncée

Du Luxembourg

Etna

Lancel

Damask.

Reine de Français

Prince Regent

Hybrid Provence.

Garibaldi

Hybrid Chinese.

Aurora

Chénédole

Honneur de Montmorency

Marie de Champlouis

Hybrid Bourbon.

Paul Ricaut

Vulcan

Gallica.

Jules Bagot

La Améthyste

Ohl

Hybrid Chinese.

Chénédole

Brennus

Descartes

Fulgens

Paul Ricaut

Hybrid Bourbon.

Sylvain

Amadis, or Crimson Bour-

sault

Ayrshire Queen

Russelliana

AUTUMNAL ROSES FLOWERING FROM JULY TO NOVEMBER.

Perpetua Moss.

Herman Regel

Damask Perpetual.

La Capricieuse

Thiers

Hybrid Perpetual.

Apollo

Baronne Hallet

Charles Bossière

Bossuet

Grand Capitaine

Hybrid Perpetual.

Gloire de Rosamond

FOR THE OPEN BORDER.

Bourbon Roses.
Comice de Seine et Marne
Deuil de Duc d'Orléans
Dupetit Thouars
Paul Joseph
Souchet
Chinese, or Bengal Roses.
Assuerus
Beau Carniri
Citoyen des deux Mondes
Cramoisie Supérieur
Fabvier

FOR WALKS AND TRELLISES,
OR PILLARS.

Chinese.
Cramoisie Supérieur
Fabvier
Marjorlin du Luxembourg
Noisette.
Melair de Jupiter
Fellenberg

FOR THE OPEN BORDER.

Hybrid Perpetual.
Berauger (New)
Cassimir Delavigne
Comte de Paris
Edward Jesse
Lane
Madame Joley
William Jesse
Bourbon.
Aurore du Guide
Charles Spuchet
Descemet
Hennequin

FOR WALKS AND TRELLISES,
OR PILLARS.

Hybrid Perpetual.
General Changarnier

Bourbon.
Julie de Fontanelle
Louis Philip D'Angiers

COLOUR: SCARLET OR CARMINE.

SUMMER ROSES FLOWERING IN MAY, JUNE, AND JULY.

Moss.
Emperor
Globuleuse
Gallica.
Eblouissante de Laqueuo
Nouvelle Provence
Pashet
Rouge Eblouissante
Hybrid Chinese.
Beauty of Billiard
Dombroskii
Gloire de Couline
Parigot
Virginie Zechlor

Gallica
Colonel Coombes
Feu Brillante

Hybrid Chinese.
Mareschal Soult

AUTUMNAL ROSES FLOWERING FROM JULY TO NOVEMBER.

Perpetual Moss.
Perpetuelle Maugot
Damask Perpetual.
Elise Musson
Hybrid Perpetual.
Doctor Marx
Etendard de Marengo
Lady Francis de Waldegrave
Lady Alice Peel
Pius the Ninth
Robin Hood
Comte d'Erve
Geant des Batailles
Louise Fabvier
Bourbon.
Bouquet de Flore
Dumont de Courcel
Henri Clay
Henri le Coq
Justine
Chinese.
Carmine d'Ybles
Prince Charles

Hybrid Perpetual.
Louis Buonaparte
Robert Burns
Comte Bobinsky

COLOUR: PURPLE CRIMSON.

SUMMER ROSES FLOWERING FROM MAY TO JULY.

Moss.
L'Obscurité
Damask.
Bouvet
Gallica.
Boule de Nanteuil
Cambronno
General Damremont
Theodor Superb
Great Western
Legouvé
William Jesse

Damask.
Duke of Cambridge
Gallica.
Heureuse Surprise
Frederic the Second
General Jacquemont
Lady Hamilton
Legouvé

Climbing Roses.
Elegans

AUTUMNAL ROSES FLOWERING FROM JULY TO NOVEMBER.

Perpetual Moss.
General Druot
Damask Perpetual.
Mogador

COLOUR: DEEP ROSE.

SUMMER ROSES FLOWERING FROM MAY TO JULY.

Provence.
Adrienne de Cardoville
Moss.
Charlotte de Sor
Damask
Crested
Fouée
Prolifère

Damask.
Sextus Popinius
Gallica.
Duchess of Buccleugh
Napoleon
William Tell

Hybrid Provence.
Adoline
La Ville de Londres
Hybrid Chinese.
Adele Becar
Belle Marie
Coupe d'Amour
General Allet
Henri Barbet
La Superbe
Tippoo Saib

Climbing Roses.
Gracilis
Madame Plantier
Superba

Hybrid Chinese.
Henri Barbet
Jenny

AUTUMNAL ROSES FLOWERING FROM JULY TO NOVEMBER.

Damask Perpetual.
Celestina
Hybrid Perpetual.
Augustine Mouchelet
Auberson
Comte d'Egmont
Duchess de Galliera
Earl Talbot
Montaigne
Rivers

Bourbon.
Augustine Leleur
George Cuvier

Chinese.
Augustine Hersent
Reine de Lombardie
Ter Scented.
Belle Marguerite
Madame Goubalt

Hybrid Perpetual.
Montaigne
Mrs. Elliott
Prudence Raser

COLOUR: LIGHT ROSE.

SUMMER ROSES FLOWERING FROM MAY TO JULY.

Provence.
Cristata
Rachel
Moss.
Blush
Crested
De Metz
Jean Bodin
Princess Royale

FOR THE OPEN BORDER.

Damask.
La Ville de Bruxelles
Leda

Alba.
Lucrèce
Vicomte de Schrymaker
Gallica.

Celestine
Cynthia
La Jeune Reine
William the Fourth

Hybrid Provence.
Adèle Sanger

Roi de Pays
Hybrid Chinese.
Comte Boubert
Coup d'Hebe
Leopold de Bœuffrémont
Paul Perras
Prince Albert

AUTUMNAL ROSES FLOWERING FROM JULY TO NOVEMBER.

Damask Perpetual.
Josephine Antoinette

Hybrid Perpetual.
Baronne Prevost
Clementine Seringe
Duchess of Sutherland
Madame Pepin
Queen Victoria (New)
Reine des Fleurs
Titus Livius
William Griffiths
Pomponne
Viscountess de Belleval

Bourbon.
Apolline
Armosa
Coupe de Hebe
Theresa Margat
Souvenir de Malmaison

Noisette.
Euphrosyne

Chinese.
Mrs. Bosanquet
Virginile

Tea Scented.
Adam
Caroline
Lyonnais
Nina

COLOUR: WHITE.

SUMMER ROSES FLOWERING FROM MAY TO JULY.

Provence.
Unique, or White
White Burgundy
Princess Lamballe

Moss.
Unique
White Bath

Damask.
Blanchette
Madame Hardy
Pulcherie

Hybrid Provence.
Blanchefleur
Blandine
La Vestale

AUTUMNAL ROSES FLOWERING FROM JULY TO NOVEMBER.

Macartney Rose.
Maria Leonida

Moss.
Perpetual White
Damask Perpetual.
Celine Dubois

FOR WALKS AND TRELLISES,
OR PILLARS.

Climbing Roses.
Blush Boursault
Rosa plena Ayrshire

Hybrid Chinese.
Leopold de Bœuffrémont

Hybrid Perpetual.
Duchess de Montpensier
Lady Sefton
Madame Trudeaux
Reine Mathilde
Titus Livius
Comtesse de Rambuteau

Bourbon.
De Lamartine
Madame Desprez

Noisette.
Triomphe de la Ducherie
Viscountess d'Averne

FOR WALKS AND TRELLISES,
OR PILLARS.

Hybrid Chinese.
Madame Plantier
Hybrid Perpetual.

Pauline Buonaparte
Leonide Leroy

Noisette.
Miss Clegg
Pumila alba

Chinese.
Alba
Camellia blanc

Tea Scented.
Clara Sylvain
Julie Mansais
Strombio

FOR THE OPEN BORDER.

Madame D'Arblay
White Rosa Multiflora

Noisette.
Aimee Vibert
Lais

COLOUR: CREAMY WHITE.

SUMMER ROSES FLOWERING FROM MAY TO JULY.

Damask.
Madame Soëtman
Alba.

Madame Legras
Hybrid Provence.
Globe White Hip
Pauline Garcia
Double White Musk
Princess de Nassau

Noisette.
Caroline Marnieuse
Tea Scented.
Archduchess Thereso
Belle Allamande
Bride of Abydos
Niphotos
Madame Brady
Romain
Taglioni

Climbing Roses.
Countess of Lieven
Queen of the Belgians
Laura Davoust

Noisette.
Caroline Marnieuse
Tea Scented.
Josephine Malton

COLOUR: FAWN, OR BUFF.

Bourbon.
Queen

Noisette.
Ophirie
Tea Scented.

Abricoté
Don Carlos
Janne Abricoté
Moiret
Mondor
Perfection
Semelo

Noisette.
Jaune Desprez
Tea Scented.
Marie de Medicis
Madame Plantier
Moiret
Safrano

COLOUR: YELLOW AND SULPHUR.

SUMMER ROSES FLOWERING FROM MAY TO JULY.

Austrian Rosa lutea
Yellow
Harrisonii
Persian Yellow
Rosa Sulphurea (Double
Yellow)

Noisette.
Clara Wendall
Cleopatra
Le Pactole
Mrs. Siddons
Simolor
Jaune (of Smith)

Tea Scented.
Devoniensis
Eliza Sauvage
Princess Adelaide
Viscountess de Oates

Yellow Austrian
Persian Yellow
Rosa Banksia lutea, or Yellow

Noisette.
Clara Wendall
Solfaterre

"TAKING A LOOK ROUND."

THIS homely phrase is often pregnant with important events. A look round, "with the eyes open," frequently points out what ought to be done without delay; at the same time, a scrutinizing glance at the progress, or otherwise, which certain crops are making, recalls to mind what was done to that crop at the proper time; and either proves the justness or the fallacy of the treatment it is undergoing. "A look round," likewise, discloses many things it would be better to get rid of. If a survey takes place after a period of showery weather, weeds will be found in places expected to be clean, almost in number and luxuriance to dispute with the legitimate crop their right to a share of mother earth. "A look round," at this season, will also be accompanied with the inward expressions of "This job must be done"—"These Carrots must be taken up"—"These Tomatoes must have the sun"—"These Cabbage-plants are stifling each other in the beds, and none planted out yet; I will have that done to-morrow"—"These autumn-bearing Raspberries shall not dangle on the ground, and get themselves all dirt in that way, I will see and have them staked up." These, and a thousand other duties suggest themselves at every step when a general survey takes place; or, if we place the case on a higher standing, and allow that the skill and strength of the gardening staff has done all the above at the most fitting time, and that, with a shake of the head, the old garden labourer tauntingly invites inspection of everything in detail, still the eye of the critic, strengthened by the inquiries he makes, enables him to see some things that he thinks may be improved another season by adopting another course, which he explains.

It is thereby seen that "a look round" may be turned to account even in the best kept garden establishments. Now the amateur, who has only a few rods of ground, may also derive some interest, if not knowledge, in this systematic survey; we do not ask him to take stock in a mercantile form, but we ask him to reflect what small, insignificant plants those *Brussels sprouts* were when the peas, which over-topped them, were removed in August, and see how they have progressed since; if he has treated them with liquid-manure, he will, doubtless, be giving that enriching food the credit for their advance; but there is another agent as well, remember; August and September treated us to more rain than is usual for these months, hence the growth of this and similar productions. "A look round" will also display, that if *Early Horn Carrots* have not been removed from the earth some little time, they will now be surrounded by a white beard of new rootlets, indicative of a second growth, and certainly inimical to the root's keeping well. "A look round" will also tell him, that in spite of what great writers say about earthing-up *Celery* by wholesale, he must not lose the chance of the first fine day to do his, if it require ever so little; and, subsequently, the duty becomes still more imperative, as the days will not all be fine after this, and the growing season, which is synonymous with the blanching season, is fast drawing to a close; these, and many other necessary jobs, will suggest themselves, leaving the operator the discretionary power which one to do first; this, of course, must be regulated by circumstances, and the urgency of the individual objects. Sifting the work to the weather, is a golden maxim never to be lost sight of in gardening matters. The fine dry days, so plentiful at Midsummer, cannot be repeated now; consequently, the housing of root-crops, earthing of *celery*, and other needful duties, must have the first attention on such occasions, while a dull day will do to prick out *Cabbage Plants*, prepare ground for the principal crop, (the earliest one we suppose to have been planted some time ago). Beds, with some mode of applying a pro-

tecting article, may be prepared for *Cauliflowers*, which will speedily want planting out in their proper quarters, while *Dwarf French Beans* and *Scarlet Runners* must have mats, or something that way, thrown over them on frosty nights, which are likely now to follow bright days, with a north wind. To these duties may be added that universal one of having an eye to order, cleanliness, and good keeping, which in a garden, even at this time of the year, is not without its merits; still, by-and-by, the removal of bulky things, as scarlet-runners, peas, &c., and the ground dug after the leaves have fallen, will give the whole that more pleasing appearance which it is difficult to obtain while leaves are falling, and other things (though still useful) present a decaying aspect. One of the principal ornaments of a garden at this untoward season are sound walks; these, whatever may be the condition of the adjoining ground, ought always to be good, and at this time of the year their utility is more manifest, when access to the turf, &c. is denied by the damp grass to those for whose enjoyments all that is ornamental in a garden was introduced. Next to walks, are the *edgings*; these, if of box, may also be in nice trim at this season; if they were cut, as we advised, in the showery weather of June, they will have grown sufficiently to show a fresh growth, and yet not so much as to become unsightly large or jagged. Many other little things may be seen to in the way of giving a tidy appearance to the whole, and we can point out no better mode of the amateur finding out what wants doing, than just taking "a look round." J. ROBSON.

THE FORSAKEN HERITAGE.

By the Authoress of "My Flowers," &c.

MY readers may remember that, some months ago, I described the effects of a thunder-storm as having smitten a tree—an old ash-pollard—and spared the cottage which stood almost by its side. That little cottage was the dwelling of a young widow and her four children, who had lost their earthly prop and stay some years ago. I am now going to tell the story of this young widow, for the benefit of others, who may, like her, be left alone on earth, with only the rich inheritance of God's promise.

Mary Anderson's husband had been a bargeman, and had settled in the village in consequence. His wife belonged to another county; she had no friends in her new parish, but they were steady, respectable, young people, very quiet, and very clean; and when poor Anderson began to sink into decline many were kind and helpful to them. After his early death the poor young widow remained still in her little bit of a cottage. It looked away from the village over a sweet, sunny scene; it had a very small garden before the door, and a rough shed at the gable end. This, with a small kitchen, and a yet smaller bedroom, was the home of the widow and her orphan family.

Nothing could be cleaner or neater than Mary and her children. She was always so tidily dressed, without a shred of finery, and her shoes and stockings were so particularly clean and well made, that it was impossible not to notice her. She was never down-at-heel, like many of her neighbours, which gives such a wretched, slatternly look; and she was never seen in torn or dragged clothes, or standing gossiping about. Her two boys went to work, the little girls to school, and the mother was always seated in-doors, busy with her needle, alone, until the evening, when her little ones were also quietly at work by her side. The cottage was, indeed, the picture of what a widow's home should be.

There is a heritage for the widow and the fatherless, signed, sealed, and delivered into their hands, when the grave closes upon him who toiled and fed them. "Leave thy fatherless children, I will preserve them alive, and let thy widows trust in me."

Mary Anderson and her children were preserved alive. She had always work and food; friends were raised up, who sent them clothes; and neater, cleaner children could not

he soon in the parish. One of her boys gave her trouble, but, after leaving one or two farmers in disgrace, he at last got a place where his elder brother worked, and grew more steady and well behaved.

Mary was a kind creature among her neighbours. She would often get up in the night to help her poor bed-ridden neighbour, Betty Lamb. She would nurse the sick, and assist in the houses of her richer friends, when she could be spared from her own duties. She was able, also, to talk well on religious subjects. She knew the truth, and she seemed also to know the promise; but what we know we do not always feel; and it is one thing to 'speak with tongues,' and another to experience the power of the Spirit in our hearts.

A rumour at last spread by degrees through the village that Mary Anderson was going to marry again. No one at first believed it, but a man, who was himself a power with a family, was seen very often digging in her garden, while Mary stood with her work beside him; and it did certainly look rather like a change, people began to think. Mary flatly denied the fact. She declared to her neighbours she had no thoughts whatever of marrying again; and when spoken to by a lady on the subject, she said quietly, but with her eyes cast down, "I don't know anything about it myself, ma'am."

That Mary was uttering falsehoods at last became evident to all. She became the wife of Sam Spicer, quitted her own little cottage, and entered upon her new home and duties, which lay at the other extremity of the parish. Mary had a right to marry again if she chose—there was no human reason why she should not; but it was plain that she condemned herself for doing so, by flatly denying the fact. Oh! nothing can prosper that is entered upon with a lie! God will not, He cannot bless it; and without His blessing—nay, with the curse upon "all liars" resting upon us—how can we reasonably expect even common good to arise from our undertaking?

Mary Spicer forgot the promise, or, at any rate, she gave it up with all its rich abundance, when she cast off her "first faith," and became the wife of a violent, savage-hearted man. No doubt she thought him what he professed to be, as we generally do upon these occasions, but her ground for so thinking was sand. He talked well, and deceived her. Let woman watch the life, and not listen to the words of the man who seeks her hand; let her be as "the deaf adder" to his voice, and open wide the eyes of her understanding to his actions. Mary Anderson closed her eyes and listened; and upon Mary Spicer's brow was stamped in deep characters, "deceit."

When the promise was cast aside, Mary soon felt the difference. She was shut up at a distance with her new partner for life; but the sad truth was soon made known and blazed abroad. Her poor little girls came among their old friends in the village with melancholy tales of all their misery; their backs and arms were black with blows; and they were glad to get out of the house and wander about any where, and any how. The sons were as miserable as the daughters; they idled about, rather than go to such a home; and instead of being clean, and well cared for in their dress, they could not get their clothes properly washed or mended. Mary is seen now and then stealing through the village, downcast and dispirited. Her neat, cheerful look is gone, and she turns away as fast as she can from the gaze of her former acquaintance. How she must mourn in heart as she passes the grave of her first husband, and the cottage where the promise rested, and gave her so many blessings! How she must weep as she reads the title-deed that God has given to the widow, and that she threw madly away! She had tried the deed, and found it "faithful and true," so that her sorrow and self-reproach must, indeed, be almost too great to bear. Her violent husband treats her as cruelly as he treats her children; they share the same fate; but the bitter pang to the mother's heart must be the stroke that falls upon her helpless and unoffending orphans.

Let the fate of Mary Spicer ring in the ears of all in her circumstances. Let it be a powerful warning to them not to cast off their "first faith," but to hold fast to the promise, and fear not that it will ever fail. While Mary sat quietly in her cottage, with her children round her, all went well

with her; the hand that rules the world, and that guides the bolt of heaven, can cover the heads of those that trust in Him, and shield them from every danger. Has He not said Himself, "Leave thy fatherless children, I will preserve them alive, and let thy widows trust in me?"

In my next paper, I shall sketch the life of one who dwells in the same village with Mary Spicer, and who is "a widow indeed."

BRITISH Eatable FUNGI.

In treating on these, I shall first speak of them collectively, and, secondly, confine myself exclusively to those indigenous to our British isles. Fungi are the most nutritious of all vegetables, and the nearest approach to animal food; some, if moderately used, are most nourishing in their raw state, as they lose their good qualities by culinary preparation; and those who have lived entirely upon them in their raw state for some time, with bread and water, state that they have experienced rather an increase of strength than otherwise. When eaten in this state, however, those should be chosen which have a solid flesh, and an agreeable smell and taste, as *Agaricus campestris* (Common Mushroom), *Agaricus procerus* (Tall Agaric), and *Tuber cibarium* (Truffle), &c.

I have little doubt that the very dread of the term Toad-stools, and the unsightly appearance that some assume when growing in damp, gloomy, and unhealthy places, to those who do not appreciate their veiled beauties, together with the idea that the venom of serpents and toads renders fungi poisonous, and that, with the exception of the common mushroom, they are all injurious, has caused, through prejudice, which is too prevalent in this land, that valuable and most extensive order of plants to be despised and rejected as an article of food. A gentleman, who has travelled nearly all over the continent, informs me, that fungi appear in most of the markets, and are abundantly eaten, and that he never saw in the public journals, or otherwise heard of a case of poisoning from them. In Russia, Poland, and throughout the greater part of Europe, they form delicacies amongst the rich, and a regular article of diet to the poor people, whole tribes being frequently nearly wholly supported by collecting them; for, in addition to the immense amount of food they supply in their fresh state, they are abundantly preserved by drying, or soaking in oil, vinegar, or brine, and form a valuable article of commerce, from the products of which the poor man is enabled to purchase other necessities, which he otherwise would be deprived of. To such an extent was the sale of fungi carried on in Italy, that in 1837 it was deemed necessary to fix a definite time and place in the public markets for the sale of fungi exclusively, and to appoint an inspector, who should examine the baskets brought into the city by the peasants previously to their sale. In most uncivilized countries they have been used as an article of diet by the natives, and in Australia, *Millin Australis* is a fungus known as "native bread."

With respect to the cultivation of esculent fungi, little has been done in Britain, with the exception of the *Agaricus campestris* (Mushroom), which it is well known is cultivated by good gardeners with as much success as other vegetables, and it is extensively cultivated in the ancient quarries which run under part of the city of Paris. The *Agaricus campestris* is native to the whole of Europe, part of Asia, Africa, and America—reaching as far north as Lapland, and as far south as Barbary.

On the continent many others have been tried, with more or less success; and I see but little reason why many should not be cultivated largely in this country, and enable us to enjoy a good supply of delicious food, which is now entirely neglected. *Boletus edulis* is cultivated largely in Paris, simply by watering the ground under oak trees with water in which a quantity of the Boleti have been allowed to ferment, the only precaution necessary being to protect, by fencing, the ground destined for their production, as deer, pigs, and rabbits are very fond of them; this plan is said to be infallible, and much practised in France. In Germany, the *Morels* were so much esteemed, that the peasants who collected them, observing that they grew most abundantly where wood had been burnt, set fire to large forests to

favour their growth; and to such an extent did this injurious practice proceed, that it became necessary to enact severe laws for its suppression. The *Truffle* has been cultivated on the continent with more or less success; a light, dry soil appears most favourable to its growth; but, like other fungi in their natural state, it is a most capricious plant.

It is well known that serious accidents have arisen from the careless way of collecting and preparing fungi for the table (which I shall endeavour to explain in a future paper on the Poisonous Fungi). For collecting, therefore, fine dry weather should be preferred, and those should be chosen cautiously which grow in wet, shady, and unhealthy situations, although they are well known to be wholesome species; those being preferred which are found in open, dry situations, and exposed to light and a free current of air. A flat-bottomed wicker basket, with clean cloth, as used in the south of England in the markets for eggs and butter, should be chosen, also a house-painter's brush should be provided, to remove dust, dirt, leaves, insects, &c., and a knife to remove the roots; the stems may be cut off close, and should generally be rejected, and the fungi may then be closely packed. They should always be gathered before fully grown, and all that are maggoty, or attacked by insects, also all that have been dislodged from their resting-place by boys or cattle, should be rejected. Having obtained as many as required, they should be conveyed home, and, with as little delay as possible, prepared for the table, or preserved for future use.

I find space will not allow me, as I intended here, to enumerate those most esteemed as food in different parts of the globe; I shall, therefore, defer it to my next paper, which will also contain receipts for cooking.—P. Y. BECCAS.

(To be continued.)

THE HONEY HARVEST

USED to offer my mite to the common stock. Up to the month of July, I never knew so bad a season since I have had bees. An agreeable change at that time took place, we had copious showers of rain, and then splendid weather to the end of the month; after which the honey gathering season is about over in this locality, as it is principally an hay-growing district.

My No. 1 swarm, an artificial one, was taken off June 10th, and put into one of Taylor's Bar Hives, and placed where the stock formerly stood (according to the "Country Curate's" plan, which answered very well in preventing any casts from coming off). But there is danger of over-doing it, as a neighbour of mine did, as in his case there were not bees enough left to defend the hive, which was attacked by a neighbour's bees, who succeeded in carrying off every particle of honey, in spite of narrowing the entrance to the hive. However, I could not, by any means, induce them to work in the super, although the stock-box was full of honey, nearly down to the floor-board. So I fumigated them, and took two bars of comb out weighing 7 lbs.

No. 2, also an artificial swarm, taken off June 23rd, into a common cottage hive, plundered it the middle of August, and took 18 lbs. of honey from it.

No. 3, natural swarm, June 25th, which was a very small affair, as we did not see it go off, but found it hanging from a tree close by, late in the evening, and I suppose the principal part of the bees had returned back again to the parent stock. I supposed, by placing the swarm in the stock's place, I should get plenty of bees to it. But I was woefully disappointed, for a most deadly warfare commenced. The result was the loss of a greater part of the bees. Can any of your readers account for the fighting?—the swarm must have come out of the hive that I attributed it to, there being no other at all likely. (But I observed fighting, more or less, at all the swarms that had been put where the stock formerly stood.) From this swarm I took 12 lbs. of honey, by destroying the bees.

No. 4, a Nutt's Hive, the bees of which I could not induce to work in the side-boxes. Swarmed July 1st; hived it into one of the side-boxes, thinking it would commence working

there; but no, the next morning I found them all united in the centre-box again. At the end of seven days, that is, July 8th, it swarmed again, and a magnificent swarm it was, and I hived it into a common hive. In the course of a week I placed an eke under it, and at the end of fourteen days it swarmed. From this swarm I took 28 lbs. of honey. The same Nutt's Box threw off a cast, a few days after which I hived it into a straw cup. From this I took 6 lbs. of honey, by fumigating it, and adding the bees to one of my stocks, as I considered they would be principally young bees, and might be of some service. I have abandoned the plan of adding the bees that I plundered to those intended for stocks, as I could see no benefit from it the spring following. I consider they only help to eat up the food of the stock, and then die before they are of any service to the stock, unless bees live to a greater age than is generally supposed.

By the-by, I saw a notice a short time ago, in *THE COTTAGE GARDENER*, that the Entomological Society had offered a prize for the best treatise on the longevity of bees. I am anxiously waiting the result. I think it a very good hit of the "Country Curate's," to preserve the brood from the hives you are plundering. I took mine carefully out, and arranged it upon the top of two of my stocks, then placed empty hives over it, and the bees presently came through, and hatched it out, which appeared to strengthen those stocks very much.—H. T. N.

P. S.—I have just seen a drone bee go into my No. 1 stock (Sept. 25th). I saw a great many the beginning of this month. Do you think they are without a queen? if so, what will be my best plan with them?

NEW MODE OF MANAGING BEES.

I HAVE much pleasure in complying with your request, and forward you the following particulars relative to the method adopted by me at your suggestion, in the case of the only four swarms which came off in my apiary. As soon as the swarms had left the hives, the stocks were stopped up; the swarms, as soon as hived, put in the place of the stocks, and the stocks removed a short distance, and kept closed from 24 to 36 hours.

No. 3 sent out, 19th June, a swarm weighing 5½ lbs. On unstopping it, the workers began to eject the drones with frightful rapidity, no other kind of work was carried on, and the hive, for we could see into it on the back side of the box, appeared clear of them in a few days. On the 14th day from swarming, a few were seen; on the 20th, piping was heard; and the following day a young queen was cast out. On the 26th July, some of the old combs were removed, from which 4½ lbs. honey were run; 1½ lbs. of bees was added to this stock on the 26th August, and 3 lbs. sugar, and 1½ lbs. honey, prepared as directed in Golding's 1s. Bee-book, was supplied previously to the 1st September, when it weighed 9½ lbs. From the swarm No. 19, ten pounds of honey were run on the 19th August.

No. 13 sent out, 19th June, a swarm weighing 4½ lbs. Immediately on its being unstopped, drone ejection commenced, and in a few days the work appeared to be completed. On the 30th July, some combs were removed, from which 3 lbs. of honey were run. No drones were then seen. As this stock did not appear to progress well, it was taken up on the 4th August, but contained no honey, no brood, no queen, and only half a pound of bees. The swarm, No. 15, was deprived, 29th July, of 7 lbs. of honey. No. 6 sent out, 1st July, a swarm weighing 4½ lbs. The pan on top was removed, and as it contained comb with drone and worker brood, and royal jelly with princess, it has, with the addition of 2½ lbs. of bees and feeding, made a little stock. As soon as the parent-hive was unstopped, the workers threw out, in the course of two or three hours, between six and seven ounces of drones. No honey has been taken from this hive, 1½ lbs. bees was added 24th August, and it weighed, 1st September, 12½ lbs., or a little more than one-half of what it weighed 1st September, 1851. The swarm, No. 4, was taken up 24th August, and yielded 7 lbs. honey.

No. 2 sent out, 3d July, a swarm weighing 4½ lbs. Drone ejection was proceeded with, as in the three cases above-named, with great rapidity. Removed side-combs, 30th

July, and ran 2½ lbs. of honey. No brood was observed. On the 5th August, added ¾ lb. bees; 20th August, 1½ lbs. bees. Prepared food, 5 lbs. sugar, 1½ lbs. honey, was given previous to 1st September, when it weighed 7 lbs. From the swarm No. 16, when taken up 24th August, 7½ lbs. of honey were run.

No cast has issued from either of these hives. My assistant and myself, in thinking over the case of No. 13 within the last few days, have considerable doubts as to the existence of any royal cell in it. On taking up No. 7, that had not swarmed, none was found. I must leave you to judge of the merits or demerits of the new mode. On these particulars you may rely. It is my intention to try it again next year, but I would not recommend it to be adopted with all the stocks in an apiary, since, from the wholesale and sudden expulsion of the drones, and the uncertain nature of our climate, the requirements of the queen might not be met in time. Huber, if I remember rightly, states that this should be within thirty days.

I send you herewith an account of what twelve stocks and four swarms have done with me, North Bucks, and having had under my notice from fifty to sixty other hives that have been taken up, a very large portion of which I furni-

migated myself, I am of opinion that my own apiary presents a more favourable report than I should have been able to give, could I have ascertained in all cases the weight of honey run from each hive. In many cases of stocks and swarms, of which I have heard, it has varied from four to six pounds. I fear there are very few stocks or swarms in this locality that can stand the winter without feeding. I shall hope that we may be favoured next year with a season as productive as that of which C. R. R. writes. *Query.* Does he weigh his hives, swarms, honey, &c.? As accuracy is so essential to the formation of correct opinions, I would suggest to him and your other correspondents, to avoid in future the terms "very large," "enormous," "amazing quantity;" the ideas they convey are so vague. A bee-keeper of forty years standing sent me, as he said, an "enormous" quantity of bees, and laid a wager, for which I reproved him, with the person who brought them, that they weighed 5 lbs. I weighed them accurately, and they were found to be only 2½ lbs. B. B.

P.S. I should feel much obliged to C. R. R. if he would give me the size of his "very large" hive, the weight of his "enormous" swarms, as well as that of his "amazing quantity" of honey of other sorts than top honey.

Particulars of Twelve Stocks and four Swarms.—Season, 1852.

Description and kind of Hive used.	Wt. 23rd April, 1852.	Wt. 23rd June, 1852.	Year of the queen's birth.	Honey taken from top in glasses or pans.	Honey taken by the removal of combs.	Honey run from combs on taking up hive.	Bees added Aug., 1852.	Prepared food supplied in August, 1852.	Wt. 1st Sept., 1852.	Wt. 1st Sept., 1851.	Wt. 1st Nov., 1851.	Remarks.
STOCKS.												
1. In Neighbour's cottage hive - -	9	..	1851	g. 7½	..	..	1½	Sug. Hon.	23½	27½	24	Swarmed and cast, 1851; cast returned, 7½ lbs. comb in glass taken, 1851.
2. In straw-hive, wood top, 12 by 8½ in. -	4½	12½	1850	..	2½	..	2½	5 1½	7	..	14½	Two swarms 19th June, 1851; 14½ lbs. comb taken in small hives in 1851.
3. In Taylor's bar-hive, 11½ in. sq. by 8½ in. -	6	5½	1851	..	4½	..	1½	3 1½	9½	16½	15½	Sent out a swarm of 7 lbs. 21st June, 1851; 3½ lbs. honey taken from side combs in 1851.
5. In straw-bar hive, wood top, 15 by 10 in. -	8½	15½	supd. 50	..	..	..	1½	..	25	18½	24	Formed from 7 lbs. bees put into empty hive at various times, between 11th and 18th Aug., 1851.
6. In common straw-hive, 12 in. by 8½ in. -	11½	16½	1851	..	..	..	1½	..	12½	25	23½	Swarmed and cast, 1851; 1½ lbs. comb in glass, taken in 1851.
7. In do. do. do. -	7½	..	supd. 50	} F. 2 p. 6½		..	12	..	..	..	19	Formed from 7 lbs. bees put into an empty hive at various times, between 26th August and 6th Sept. 1851.
8. In straw-hive, wood top, 14 in. by 7½ in. -	4½	..	1850	..	3	..	..	..	12½	..	14½	Swarm of 1st of June, 1851; deprived of 13½ lbs. honey, and fed freely for winter of 1851; cast of 2 lbs. added 17th June, 1852.
9. In box diag. bars, 11½ in. by 6½ in. -	6	..	1851	g. 6	3	..	..	..	25½	18½	17½	Two casts of 1851; no honey taken in 1851.
10. In straw-hive, wood top, 12 in. by 8½ in. -	3½	10½	unkwn.	..	..	0½	..	..	..	..	13	Stray swarm of 1851 purchased 10th June; no honey taken in 1851.
11. In do. do. do. -	7½	11	1851	g. 1	..	..	..	..	14½	22½	20½	Swarm of 21st June, 1851, weighing on that day 6½ lbs.; no honey taken in 1851.
12. In common straw-hive, 12 in. by 8½ in. -	9½	10	supd. 50	..	..	6½	..	..	..	..	16	Did not swarm, 1851; no honey taken in 1851.
13. In do. do. do. -	5½	4½	1851	..	3	Nil	..	..	..	..	15½	Cast of 3 lbs. 23rd June, 1851; no honey taken in 1851.
SWARMS.												
14. In Taylor's bar-hive, 11½ in. by 8½ in. -	..	..	1851	..	..	10	..	..	..	..	..	This hive increased from 3rd to 10th July, 8½ lbs.
15. In common straw-hive, 15 in. by 7 in. -	..	..	1851	..	7	..	..	12 4	15½	..	..	This hive increased from 3rd to 10th July, 9½ lbs.
16. In do. do. do. -	..	..	..	..	..	7½	..	..	..	..	..	This hive increased from 3rd to 10th July, 6½ lbs.
4. In straw-bar hive, 12 in. by 8½ in. -	..	..	..	..	..	7	..	..	..	..	..	This hive increased from 1st to 10th July, 9½ lbs.
	..	..	..	22	23	52½	7½	20	6½	145½	..	..

I cannot speak with certainty respecting all these hives, but, judging from the eight which I weighed several times, I am of opinion that they have, on the average, decreased since the 18th July. Looking at the above statement, it is evident that had the honey been taken from these 16 hives

they would, after consuming 20 lbs. sugar, and 6½ lbs. honey, and receiving 7½ lbs. bees, have only weighed on the 1st September, 1852, 243 lbs., or 77 lbs. less than they should have done to stand the winter. Your readers must form their own judgment from these facts. B. B.

THE LIVERPOOL POULTRY SHOW.

The fifth annual show of the Manchester and Liverpool Agricultural Society was held on the 23rd of September, in the capacious Market Place, in Great Homer-street, Liverpool. For the first time, the Society added a show of poultry to the other attractions of its Exhibition, and we congratulate them on the success of their first experiment in this interesting department of rural economy. This, as our readers are aware, is not a good time of the year for showing to advantage their feathered favourites, but, making reasonable allowance for this drawback, this new feature of the Society's exhibition was highly creditable. As is our usual practice on such occasions, we proceed briefly to notice each class. The *Dorkings*, which were the first class here, presented some good pens of fowls, the prize being awarded to Capt. W. Hornby, for three very good birds. The same gentleman carried off the prize in the *Spanish* class, in which there was nothing approaching in excellence the birds exhibited by him; and he was equally successful in the *Game* class, against two or three very good competing pens. In the *Cochin* class, the prize was very deservedly given to Dr. Gwynne, of Sandbach, for three very fine fowls; this class altogether was not first-rate. Of *Malays*, there were none shown, and the *Hamburg* and *Poland* classes were not good enough to deserve notice. The *Geese* came next, and Mr. Townley Parker again carried off the prize, as he did also in the class of *Goslings*—Capt. Hornby running him very close in both classes. Capt. Hornby obtained the prize for *Aylesbury Ducks*—those for *Rouens*, and for "any other variety," being awarded to very good pens belonging to Mr. Henry Worrall. One pen of *Turkeys* only was shown, by Mr. E. W. Wilmot, but they were excellent, being of the "wild American breed." In the *Duckling* class, the prize again fell to Capt. Hornby, for six beautiful *Aylesburys*; Mr. Townley Parker's *Rouens* being but little inferior to them. In the class of "six chickens," some very fine birds of several varieties were shown, and the judges gave four prizes. Three of them were awarded to Capt. Hornby, for *Cochins*, *Dorkings*, and *Spanish*, respectively, and the fourth to William Copple, for *Bolton Greys*. The Society's medal for the best pen of birds in the yard, was adjudged to Capt. Hornby, for his six *Cochin* chickens, making the tenth prize obtained by him; a proof of what may be accomplished by the judgment and attention of an individual fancier.

With the exceptions to which we have referred, there were some good birds shown in each class, and we have no doubt that the success of this, their first attempt, and the interest excited by this portion of their exhibition, will induce this spirited Association to repeat the show of poultry in succeeding years; and that as the interest taken in them increases, and the encouragement given by the different Societies is extended, the different breeds of domestic fowl will be improved, and disseminated throughout the country.

The judges were Mr. Bissell, of Birmingham, and Mr. Nolan, of Dublin, and their decisions appeared to give universal satisfaction. The arrangements of the show by the secretary, Mr. White, were very judicious, and the poultry pens were as good as we have seen anywhere.

LIST OF PRIZES.

- One male and two female birds to be shown by each competitor.
- For the best white, speckled, or grey *Dorking Fowls*, £1. Captain W. W. Hornby, Knowsley, near Prescot, pen of fowls, of the *Dorking* breed, aged about 2 years.
- For the best *Spanish Fowls*, £1. Captain W. W. Hornby, Knowsley, near Prescot, pen of fowls, of the *Spanish* breed, aged about 2 years.
- For the best *Game Fowl*, £1. Captain W. W. Hornby, Knowsley, near Prescot, pen of fowls, of the *game* breed, bred by himself, aged 2 years.
- For the best *Cochin-China Fowls*, £1. William Cust Gwynne, M.D., Sandbach, Cheshire, three fowls, of the *Cochin-China* breed, bred by himself, and hatched, the cock at the end of March, and the pullets at the middle of March. On sale. Price £30.
- For the best *Malay Fowls*, £1. No entries.
- For the best *Golden-pencilled Hamburg Fowls*, £1. The variety called "Bolton Bays" or "Golden Hamburg" fowl, must be exhibited for this premium. No entries.
- For the best *Silver-pencilled Hamburg Fowls*, £1. "Bolton Greys," "Chitterprats," and "Silver-pencilled Dutch" to be shown for this premium. John Taylor, Mahaw Moor, near Bolton, pen of fowls of the *Silver-pencilled Hamburg* breed, bred by William Mill, aged 4 months.
- For the best *Gold-spangled Hamburg Fowls*, £1. "Golden Pheasant,"

"Golden Mooncys," "Copper Moss," and "Red Caps," to be shown for this premium. R. C. Lowndes, Club-moor, near Liverpool, pen of fowls, of the *Golden-pheasant* breed, bred by himself.

For the best *Silver-spangled Hamburg Fowls*, £1. "Silver Pheasant," "Silver Mooncys," and "Silver Moss" fowl, to be shown for this premium. No award.

For the best *Poland Fowls*, £1. Black, with white crests, golden or silver. No award.

For the best of any other breed or cross of *Fowls*, £1. The breed to be stated on entry. Captain W. W. Hornby, Knowsley, near Prescot, pen of fowls of the *Gold-laced Bantam* breed, bred by himself, aged 1 year and 3 months.

GEESE.

For the best *Geese*, £1. Thomas Townley Parker, Sutton-grange, near St. Helens, geese of the common breed, aged 3 years.

DUCKS.

For the best *Aylesbury Ducks*, £1. Captain W. W. Hornby, Knowsley, near Prescot, pen of ducks, of the *Aylesbury* breed, bred by himself, aged 1 year and 4 months.

For the best *Rouen Ducks*, £1. Henry Worrall, Knotty-sash House, Liverpool, pen of ducks, of the *Rouen* breed, bred by — Henderson, Esq., aged 8 months.

For the best of any other variety of *Ducks*, £1. Henry Worrall, Knotty-sash House, Liverpool, pen of ducks, of the crossed wild breed, bred by himself, aged 1 year and 1 month.

TURKEYS.

For the best *Turkeys*, £1. Edward Woollet Wilmot, Hulme Walfield, near Congleton, pen of turkeys of the wild American breed, hatched April, 1851.

YOUNG POULTRY.

The day on which they were hatched to be stated.

For the best *Six Goslings*, £1. Thomas Townley Parker, Sutton-grange, near St. Helens, goslings of the common breed, bred by himself, hatched on the 10th April last.

For the best *Six Ducklings*, £1. Captain W. W. Hornby, Knowsley, near Prescot, pen of ducklings, of the *Aylesbury* breed, bred by himself, aged 4 months.

For the best *Six Chickens*, £1. Captain W. W. Hornby, Knowsley, near Prescot, pen of chickens, of the *Cochin-China* breed, bred by himself, aged 5 months and 5 days.

Captain W. W. Hornby, Knowsley, near Prescot, pen of chickens, of the *Dorking* breed, bred by himself, aged 4 months.

Captain W. W. Hornby, Knowsley, near Prescot, pen of chickens, of the *Spanish* breed, bred by himself, aged 5 months and 1 week.

EXTRA PRIZE.

For the best pen of Poultry in the show yard, the Society's SILVER MEDAL. The judges awarded it to Captain W. W. Hornby, for *Cochin-China* chickens.

NOTES UPON BACK NUMBERS.

The *Palma Christi* is not difficult to grow as an out-of-doors plant. It should be raised in the spring hotbed, shifted once liberally, and treated exactly as a balsam till the frosts are over, when it should be planted out in very rich soil, or what would be still better, plant it like a vegetable marrow, with a barrowful of hot manure beneath the soil. Many other tropical plants would grow and show their fine foliage in the summer time if treated thus, and there is not a handsomer one than the *Palma Christi*. All laterals and blossoms should be carefully removed till the plant is four or five feet high.

The *Hybrid Begonia parviflora* by *Cinnabarina*, is now in flower in my stove. It is a miniature *Cinnabarina* in habit, more branched and showy, but inferior in colour. The pollen of *Cinnabarina* colours some of its mules highly, but others not so well.

Funkia subcordata will not flower satisfactorily out-of-doors, and generally not even in the greenhouse, the flowers being usually deformed by the curling or unequal expansion of one side of the flower. In the stove there is not a more exquisite plant. The flower is of the whitest white I know, the scent delightful, and the leaf a form for the sculptor. Small plants do the best, grown from pieces broken off from the mass in the spring, and each containing one, or at most two crowns.

Your correspondent's "black *Geranium*" was probably *Hoarea melanantha*, a weed, in fact, as he says, but some pretty mules were raised from its pollen some years ago. He must not be cross about his first turn at African bulbs. They, and all imported bulbs, are hard to establish, even for an old hand, sometimes. These little Africans are highly interesting plants, and the time will come, and that soon, when everybody will be running after them again.

Our good instructor, Mr. Beaton, alludes to a tropical experiment of mine. It was not, however, an old *holbed*, but a new one made for the purpose, only very spacious and

shallow; one foot was the depth of hot dung, but this was trodden very firmly down on the brick bottom, and enclosed by a little brick-wall to that height. I wished to try if a large and shallow mass would produce and retain the heat as well as the same quantity in the usual more cubical shape, and I think it did so. Most of the tropical plants likely to be experimented upon, such as the South American *Scitamineæ*, and the like, would, if our climate continued as it is to day, be in their beauty, as to blossom and good development, about Christmas-day. We, therefore, try to give them such a start, by means of the bottom-heat, as will enable them to begin soon enough to be ready to flower and thrive while our fine weather lasts; but this, the perfection of the thing, will not be done till we try Mr. Beaton's plan of a cheap and simple means of bottom-heat, always at command; while above ground, the plant enjoys what it never gets in our plant-houses, fresh air and exercise. Many men have many minds, and so have the many members of the large family *Amaryllis*. Scarcely any two require exactly the same treatment. The name of the sorts should be given to prevent poor Editors giving evasive answers. Much of this diffidely will cease when warmed borders in the open — In two minutes I shall be on my hobby, so adieu.—A CORRESPONDENT.

(From whom we hope to hear very often.—Ed. C. G.)

MR. RIVERS'S CRYSTAL PALACES.

To gardeners and amateurs. You are all well aware of the annual trouble and expense of fruit-trees on walls, after pruning, nailing, and covering (*but not protecting*), for that is almost an impossibility in our northern parts, and frequently is an entire failure in the more southern districts. Gardeners have been for years crying out—"I'm afraid I shall not be troubled with much fruit this season, as my peaches, pears, plums, and cherries, all apparently are cut off by the frost, and it's nothing but an entire disappointment." Now, to prevent all this, I would earnestly recommend all horticulturists and lovers of gardening to step into Mr. Rivers's nursery, and see there fruit grown to the greatest perfection, such as peaches, plums, pears, apricots, and apples. I, myself, was highly gratified, two months ago, by a visit to his nursery, likewise, at the same period, to the seat of Lord Roden, where I saw, in both places, peaches and apricots in pots, laden with admirable fruit. What would be more pleasing and interesting than to have one or more of these pots, with the sides washed, and the surface covered with a carpet of moss, placed on a nobleman's table, with three or four dozen of beautiful fruit on each plant, which is very easily to be had with only a slight attention. There is no nailing, no tying, and no covering at night with these, only a little additional watering and pruning, as our kind friend Mr. R. directs. And I am sure that the ladies would take great pleasure in gathering the fruit themselves in their dining-rooms. Some are apt to say that the "orchard-houses" are nothing more than rickety cow-sheds, but for them to be convinced about that, I should strongly recommend them to pay one of these structures a visit. Perhaps some of our aged friends, in the same capacity of gardening as myself, would like to know how Mr. R. manages to produce his fruit so abundantly, and if they inquire of him, I have no doubt he will inform them, as I know he is always pleased to give any one information concerning their well-doing. I can safely say, that I could grow fruit in the same way very satisfactorily, although not of so much experience as some; but I hope, as glass is so cheap, that I shall be able to see, one day or other, an orchard-house as large as the Crystal Palace that stood in Hyde Park. A. B. C.

Poultry Mania.

DORKING, versus COCHIN-CHINA.

"*Tantus componere Iles.*"
(To decide so great a controversy.)

Virgil's Eclogues.

COCK-FIGHTING, as a national pastime, has become dis-funct, and in lieu thereof, the owners of cocks have entered into strife among themselves; happily, however, the fight

is a bloodless one, and in the main is limited to ink-shedding. Most learned have been the controversies, most conflicting have been the facts; and but one truth stands conspicuously forth, namely, *this* a fowl which passes under the name of "Cochin-China," is just now "the pet of the fancy." We hate fool play, and, therefore, candidly confess, that *why* this has come to pass we cannot determine. Vulgar people insinuate, that it arises from a vain desire to imitate Majesty in small things; and just as the daughters of the honest burghesses of this realm, on all occasions, throw back their velis in a coil around the sides of their bonnets, and tied them in a knot under their chin, on hearing that the Queen, in a stormy day, was even with the bonnet thus accoutred, so have "Cochins" become the fashion, because a few "noble specimens" of the breed occupied a conspicuous position in Her Majesty's aviary. We reverence royalty, wherever we find it. When a king squints, it becomes his subjects to squint likewise. We have heard of a courtier who said he would bow to a thistle if it were surmounted by the crown of his sovereign. We honour the sentiment. Where is the hungry donkey that would not perform a like act of homage?

But to return to the Cochin-China fowl; what are its qualities? In what special excellence does it transcend the whole race of Spanish, Dorkings, Poland, or Game? In size—in that estimable quality in which a painted sign-post surpasses one of Mulready's cabinet pictures—in that important endowment in which Daniel Lambert was superior to Lord John Russell, and in which the elephant surpasses a man. All its qualities are colossal; and, therefore, in an age when people wish "to get as much as they can for their money," they are popular, fashionable, and "the pet of the fancy." It is true, that when they are young, they are superlatively ugly; when at adult age, superlatively tough; and when old, these two qualities are blended in a superlative degree. But then, they are very large, very dear, and very fashionable; and these qualities, with the majority, are sufficient to compensate all other defects. The poultry-shows, generally, proclaim that these tailless birds are, as we have described them, "pets." They have all the "prestige" of novelty. All the fervour and enthusiasm which Englishmen lavish on foreign favourites, whether Italian singers, French ballet-girls, Swiss valets, or German nurse-maids, are now bestowed on these emigrants from India, Cochin China, and the Malay peninsula. Their names appear daily in large capitals in the advertising sheets of the *Times*, the *Gardener's Chronicle*, and other first-rate journals. Mr. Stevens, the auctioneer for all the property connected with natural history in its wide-spread ramifications, exhausts his oratorical powers in their praise; and every dandy who hears of poultry-shows exclaims—"Aw, I've no taste for these things, except, aw, except for Cochins; the rest are low, sir, decidedly low." And yet, in spite of all this diletant dandyism—this popular favour—we venture to predicate, that the Cochin-China fowl will disappear as such;—like the Arab horse in England, it will become lost in crosses with other breeds, and be represented by a race possessing their great size, without any of the numerous defects which now characterize the bird.

During the past summer, we saw a Cochin chicken running about at three months old, with "dowl" upon his back, with legs nearly as long as a Flamingo's, and as bare behind as a pickled goose. He had, it is true, "roughed it," bitterly, and, therefore, did not resemble very closely the pots of Sturgeon and Punchard—yet he was a genuine Cochin; and around him, reared under, and exposed to precisely the same influences (birds of the same nest and hatch), were gaily congregated chitterprats, half-bred game chicks, and a host of mongrels, carrying in their veins as heterogeneous a mixture of vital fluid as rolls in the arteries of a Yankee, and yet these were all well-feathered, respectable, and decorous, waving their tails with modest dignity, while the unfortunate Cochin ran about as bare, if not as ornamental, as that variegated baboon, who rejoices in the euphonious name of "Cynocephalus mainon." It would become the exertions of benevolent young ladies to make flannel coverings for these ornithological nullities, if such a breed is to be encouraged to the exclusion of the more useful and ornamental denizens of the poultry-yard.

A short time ago, some Cochins-China fowls were awfully angry with the Royal Agricultural Society for placing the "Dorking Fowl" in Class A of their prize list, instead of the Cochins, but what could a farmer do with a lot of naked Cochins? He requires a breed that shall come early to maturity, and weigh heavily, and lay well; and in these particulars the Dorkings far surpass the "pet of the fancy." A Dorking pullet, hatched in April last (13th), within one hundred yards of the unfeathered Cochins above referred to, weighs, at this date, six pounds, and has laid eggs every alternate day for the past three weeks. This is the breed for the agriculturist, and the Society has acted wisely and well in their selection and arrangement of the prize list, for if a genealogy, stretching back for centuries, even far beyond the age of the learned Aldrovandi, if astronomical, classical as the Bard of Avon's writings can make them, if the authority of Pliny and Columella can outweigh the ephemeral opinions of the fashionable dandyism of the present day, or, what is far more to the purpose, if beauty of plumage, early maturity, great size, fecundity in eggs and chickens, whiteness, and delicacy of flesh, constitute claims for preference in the gallinaceous tribe, then, may the high bred speckled Dorking calmly abide its time, and treat with proud and becoming indifference the popular mania in favour of the long legged, tough, tall, and tailless Cochins (lunas). Such, at least, is the modest opinion of

Mickleover, Sept. 22, 1852. AMICUS GARL

FAMILIARITY OF BIRDS

The Robin—The nursery ballad on the "Children in the Wood," has done much for the protection of the Robin. He is a bird which never congregates, but is widely spread, and there are few localities in the country that are not enlivened by his presence. He is a general attendant on the gardener, particularly of the operations of the spade, in search of worms and insects. He is very familiar, and, if encouraged, soon becomes half domesticated. For two or three years a robin formed one of my family, seldom did I sit down to a meal without his being on the table. He would enter the house by any door or window, and watch his opportunity to pass into the room as the servant brought in the dishes. At other times he would appear at the parlour window, and on being admitted would fly to my knee, or perch upon the back of a lady's workbox, and among its contents of bobbin and reels of cotton he would find great amusement. Upon this he would warble by the half hour together, in soft, musical notes, which, at times, appeared to come from different parts of the room, as though he was a ventriloquist. He would feed from the hand, and was not disturbed by the movements of the family.

The Chaffinch—Another of my familiar acquaintance was a hen Chaffinch, an almost constant visitor. One morning she brought for my amusement, her little family of four young ones, and having arranged them in a row on the breakfast table, commenced feeding them. After their repast a difficulty arose, she wished to withdraw them, but they remained immovable, and it was interesting to observe her endeavours to accomplish this object, flying in and out of the room, and calling to them, but without avail. They appeared to enjoy their position, and were deaf to her solicitations. At length, one of them flew out, and the rest followed in succession.

The Jackdaw—One day a female of my family, on visiting a neighbouring farm, brought home a young Jackdaw, which had been caught by a boy. He was turned loose in the garden, and but little thought of him. He grew up, however, very sociable, and though he had full use of his wings for six years, he never left us, and was found dead at last on the gravel walk, apparently killed by a stone. His first concern of a morning was to call me up, by tapping at my chamber window; he would then attend me in my walks before breakfast, to pick up the earwigs, as they were emptied out of the flower pots, placed as trays on the tops of the dahlias stakes. He invariably assisted in our garden operations, seizing the small worms, grubs, and insects. During the day, his favourite resort was an elm tree by the road side, and his great delight consisted in holding collo-

quies with the children as they went to, and returned from, school. He would visit the neighbouring cottages, particularly if any workmen were employed about them, would sometimes accompany his mistress to church, which he was with much difficulty prevented from entering, and became at length so troublesome, that on these occasions he was obliged to be shut up if at liberty, he would watch for her return, and call to her the moment he saw her among the crowd. He would meet me on my coming home from a neighbouring town, and fly for a mile by the side of my gig, uttering "Jack." He would attend me in my country walks, sailing over my head, and alighting on some tree in advance to invite me onwards. When drinking tea on the lawn, he would testify his joy by exhibiting all manner of gambols, sometimes over our shoulders, sometimes hiding himself in the folds of a lady's dress, but generally ending in seizing a slice of bread and butter, and flying off with it. His faults were—his over familiarity, and making too free with what did not belong to him. Few animals exhibited greater sagacity, he knew when he had done wrong, his life was a system of schemes and contrivances, and his death a family loss.

To those who are fond of studying the habits of birds, and whose position in life enables them to indulge in it, a delightful source of instruction and recreation may be found in cultivating their familiar acquaintance.

S. P., Rushmore

TO CORRESPONDENTS.

PROLIFICACY OF COCHIN-CHINA FOWLS—Mr E. George, of the Rookery, Chaldon, says, "Being a breeder of light coloured Cochin China fowls, perhaps you will permit me to add my testimony in their favour, which I think your readers will allow the following facts to be. I have had seventy chickens from one hen, since the end of February last besides using some of her eggs in other ways, and one dozen now hatching, and, to my own knowledge she has laid a double yolked egg and a soft shelled one within twelve hours. I have had a brood of chickens from eggs of a pullet hatched the middle of March last; cockerels of same age weighing above nine pounds, pullets six pounds, and others a month younger, five pounds and three quarters. As to their hardihood I can only say the numbers we have lost in rearing does not amount to seven per cent, and nearly half of those have been accidents such as getting into the wrong coops, and being killed by the hen, &c. Now and then a bird will gain weight even faster than those already mentioned, for instance a cockerel, which I exhibited at Lewes has continued to gain more than an ounce a day ever since."

HAIR NAILS—Mr W. J. Beely, of Chaldon, near Coulsdon Surrey says, "Referring to former numbers of your periodical in which it has been endeavoured to show the best place for setting eggs allow me to remark that, having kept the Cochin China fowls the last five years I have set the eggs on the bare ground, in wooden boxes on the ground, and, lastly, in wooden boxes raised from the ground and (by way of experiment) lined with kamptuloon, (a composition of India rubber and cork), and I am of opinion that a hen will hatch equally well in either of the above situations, if comfortably placed—the number of chickens brought forth depending entirely on the health of the layers and others. Can you tell me whether there have been any of the Cochin China fowls imported of a pure white colour, with top knots? Fine specimens of this variety are to be had at Hong-Kong and Shanghai, as I am informed by a party who has been at those places. We have not seen or heard before of white Cochin-China fowls with top knots. We may as well cut the other day with a slight tuft of feathers on the head, but we think it was symptomatic of a cross in the blood of one of its parents."

DATURA JUST BLOOMING (Greenhorn)—In the first place, give it abundance of water all the time that it is in bloom, and, as we are so near the winter, cease watering altogether as soon as it is out of flower; the leaves will soon drop, and the plant will look deplorable for ten days or so, but you may smile the while. If the leaves do not fall in ten days after the drooping, pull them off, and let the plants stand naked all the winter and, unless the green top branches begin to shrivel, you need give no water, but if they do, give the pot a good soaking, to keep the tops fresh for cuttings. Any time in March or April, when you have a cucumber bed at full work, cut down your Datura as far as you like—or say at a venture, to within a few inches of where it began to grow from last season, then with a thick paint made with water, soft soap, a little sulphur, and a lump of clay cover the whole body of the plant, and let this remain as long as you can—it is to kill and keep off insects. Freely joint the tops with a cutting, but you had better keep two joints to a cutting when the joints are far apart—one joint at the bottom for roots, the other for leaves, and so, when the joints or eyes are close on each other make the cuttings four or five inches long. They like a brisk bottom heat, but not much water.

MAURANDYA BARCLAYANA (Joid)—It is a perennial, and it may be cut in a good deal, and taken up and potted, but cut down altogether. Keep a foot or so of the main stem, or stems, and six inches of as many of the side branches as you can train without crowding; and if there be any very small branches near the root, keep all of them, and at their full length. You had better do all this cutting at once, but let the plant remain to the end of October. One of the greatest errors in gardening at the present day is cutting in, or pruning, any plant except the very commonest thing—as a laurel—the same day or the same week as it is to be potted from the borders, or transplanted elsewhere, Maurandya particularly so, as they make such long warty roots, with few fibres, but

few plants deserve to be kept from year to year more than they. They also want to be in a cool, airy place all winter, and not get much water until you see them grow away freely. We are going to keep all our old plants of *Maurandias*, *Lophospermums*, *Eccremocarpus*, and *Cobaea*, this winter. We shall have them in different lengths, from one to ten feet.

FLOWER-BUDS (S. S.).—We are going to give plans of different kinds of flower-gardens, single beds, and single beds, and groups; add to open the way for all this, we only propose, at first, to engrave actual flower-gardens as they now stand, with accompanying criticisms and suggestions. Your plan will appear in the series as a good example of a very useful way of making the best of a limited space of ground; meantime, we shall file your letter, to see what we can do for what you want most.

CHRYSAETHUMS (Lora).—"How soon is it advisable to force them; I have a large stock, and grow for show in greenhouse only?" They stand no forcing. From the 15th to the 25th of October we have put those with earliest flower-buds into a house, with doors open at both ends night and day, and we gained nearly a week, which was a great feat.

GERANIUMS IN POTS (1864).—"These are intended for show in greenhouse; mine are already out down, thinned, and kept outside. When should I take them to the greenhouse?" As soon as you see your well-arranged letter in print.

CINERARIAS (1864).—"Some of my varieties, and all my *Flora M'Innes*, show appearance of either dry mould or mildew on the leaves (which are most luxuriant). I have sponged the leaves, and removed the diseased plants out of the greenhouse into a cold frame; have I done right?" Quite right; keep them in a dry, cool air, and dust them with flowers of sulphur.

AGANTHUS UMBELLATUS (S. S.).—Take it up about the end of October, but March is time enough to divide it, unless you are in a great hurry, when you may take the spare any day in the year, and part it into single plants.

PLANTS FOR TRELLIS (Ibid.).—Plant one *Clematis montana*, one common *Honeysuckle*, one *Felicite Perpetuelle Rose*, then one *Japan Honeysuckle*, and the last a *Sweet-scented Clematis*, as permanent plants to cover your thirty feet of trellis. You did not say the height of it, but we have assumed ten feet high; then you may plant either duplicates of these, or any you may prefer yourself, to fill the whole length nearly at once, and remove them as our selection fills up. Plant the *Laurels* as far from them as you can, and keep them within due bounds. Your soil will do, but have it trenched, and use great quantity of water the first season; all climbers like it, and stronger occasionally.

SPRING BULBS AND BEDDING PLANTS (M. B. S.).—In the second week in May, 1852, we called, among other places, at Eaton Hall in Cheshire, and at Knowley, near Prescott; and there, at both places, we found gardeners removing immense quantities of Crocuses, Tulips, Hyacinths, and all the principal spring bulbs, from the flower to the reserve garden, to ripen their leaves, and keep the beds free for the summer crops. Since then we have ourselves practiced that plan, and also that of potting all, or most of these bulbs, and removed them in their pots as soon as their beds are wanted; and, upon the whole, we have come to the conclusion that it is best and easiest not to pot any of them, but to remove them the first rainy or showery day after they are out of bloom, to take special care of the leaves, and to keep the ground well watered as long as the leaves kept green. We have also removed spring bedding flowers, as Auriculas, Polyanthus, dwarf Phloxes, and such like, in the same way. Any good plant that flowers in the spring may, under this system, be made a bed of. The first flower-bed we ever saw was a bed of *Phloxes*, or Polyanthus. About the 10th of May you can remove a bed of Hyacinths, &c., and plant it the same day with *Veranuses*, or *Calceolarias*, &c., filling in the spaces between the plants quite well with autumn-sown annuals. Next day it will look quite as well as with the Hyacinths, and next week it may be in full bloom, according to the kind of annual used.

DOUBLE GLAZING (Y. J. Bailey).—"We made double-glazed windows for the fruit-room, when common glass was 1s. a foot, and we liked it much. A double-glazed frame would be as warm as a single-glazed one with double matts on—say one inch or less space will do between the glass. When we hear where glass is to be had at a penny per foot, as lately stated in our paper, we shall return to the subject."

ARCHES OVER WALKS (E.).—"Your plan is most excellent, and the best we know of for the display of hardy climbers. A walk seventy yards long, and over the arches nine feet apart, and about seven or eight feet high, will look extremely well. Let the centre of the arches be full eight feet above the walk. The standards to spring the arches from should be 2½ and a half to seven feet high; from these, and on both sides of the walk, arches should spring along the line of the walk, as well as across the walk. Let us earnestly advise you to adopt this suggestion. Then use duplicate plants along the whole line—that is, begin with 3 *Clematis montana*, one on the right, the other on the left hand; then 3 *Japan Honeysuckle*, 2 *Crimson Bourneville* rose, 3 *Clematis cirrhosa*, 1 flower in February and March; 3 old *Double Musk* rose, or some good *Wistaria* to flower in the autumn; 3 *Aristolochia alpina*, for their handsome leaves, and for the sake of variety; then 3 *Felicite Perpetuelle* rose, 3 *Sweet Clematis*, 2 *Laura Danouet* rose, 3 *Clematis Hendersonii*, 3 *Solanum jasminoides*. The following Roses are also eligible for your purpose: Queen of the Belgians, Rampant, Princess Marie, and Myriamides, Queen's Queen, and Wells's White, or Madame d'Arbury. Try also *Tecoma*, or *Dignonia radicans major*. We would plant annual and perennial creepers "as *calceolarias*, but not till after the principals had one season's growth. Then we would try *Gloire de Rossmore* rose at the bottom of the rose pillars *Clematis Sieboldi* and *purpurea*, with their kind; *Eccremocarpus*, *Passion-flower*, *Lophospermum*, *Convolvulus major*, &c.

GOLDEN-CHAIN GERANIUMS (Rose).—This, and the *Flower-of-the-day*, are best propagated in the spring, and should not be kept in pots during summer. In winter both of them will require little water, and to be grown in good turfy peat.

ERYTHRINA CRISTATA-GALLI (Ibid.).—This is also best from spring cuttings, just like Dahlias, when the old plants make shoots three inches long. We do not usually recommend gardeners.

VINES (Rhydy Grow).—"Your vines have rooted from the very top of the stem under ground." This is well; encourage such habit. For your insects, look to our back numbers for advice at the dressing used at pruning time. If they commence operations on the foliage in the ensuing

spring, see to fumigations, and the use of sulphur, as repeatedly advised in these pages. You must be moderate in your crop next year, suffering merely the strongest shoots to carry a bunch. The long-rod system is certainly manageable, but the close spur system for us, on the whole.

FRASCHES (A. B. G.).—See an article on root-pruning in page 399 of last volume; this will meet your case. The large yellow *Ethevras*, *macrocarpa* and *missouriensis*, are hardy; but the best way to propagate them is to get a few old stools, and frame them, and propagate as Dahlias. They may be raised from seed, also, sown early in February. *Verbena* will do better kept in the way you describe, but beware of confined damp, and use stout cuttings.

PEARS CRACKING (E. H. F.).—Your Althorpe *Crasanne* cracks through a capricious soil—that is to say, one suddenly liable to drought. If you cannot transplant, apply a top-dressing in the end of April, consisting of three parts manure, and one part adhesive loam, nearly six inches in thickness.

PEACH AND NECTARINE OVER-LUXURIANT (A Cheshire Rectory).—Your main stem should have been pinched when it had grown nearly a foot; it is now established as a glutton, or rubber. If the rest of the tree is disposed to growness, root-prune immediately. Watch the shoots produced by your robbers next June, and pinch them as soon as six or eight inches long, repeating it in July in the next growth.

GREENHOUSE (Rev. R. Blackburn).—Your plan is good, and will succeed. This kind of house, with some trifling modifications, is much wanted by the amateur. We would have sashes at front to slide horizontally in a groove, in order to reach the pots with facility, as also for ventilation purposes. Be sure you have capacious ventilators in back wall, the roof of course fixed. We would have four in yours, which is 17 feet 6 inches long, each half-a-yard long, and six inches wide, placed close to the top. You will also do well to provide a canvass shade, with a penthouse at back to receive it. You had better have four or five vines; when they are so far from the roof they have a tendency "to draw," or run upwards, and any attempt to oppose this will be well-nigh futile. If you have no piping in front, you may readily obtain another shelf.

PLANTS FOR AUSTRALIA (J. T. W.).—As for fancy things, like florists' flowers, annuals, or any other kind of plant that you like or admire, you will find them just as useful in Australia as if you were only going with them from Inverness or Aberdeen to Exeter. All the bulbs of South Africa, and all the greenhouse bulbs from Washington, to the shores of Patagonia, do better in Australia than in Devonshire; so you may take out any bulb, root, plant, or seed you can lay your hands on; but we must not say where is the best place to buy anything. It is perfectly useless to ask us, or any other authority, what are the best plants for Australia. Whatever plants you like best are sure to be the best for you, either here or in Australia.

THORN BEFORE A HOUSE (Subscriber from No. 1).—"Your 'good lady' evinces better taste than many whom we could name, that are satisfied with such common things as Lime-trees before their doors, near London; and as you want them more for ornament than for screens, let her, by all means, have something handsome, and more aristocratic—say a couple of *Scarlet* or *Dwarf Horse-chestnuts*, the handsomest tree in England while in blossom. Ask for it by the name of *Aesculus rubicunda*; and those *Thorns* which make an equal display with either their flowers or fruit, and you can cut them to anything, if need be: *Crataegus orientalis*, with splendid yellow, large haws, that are good to eat; *Crataegus prinos*, the *Macplus orientalis* of Tournefort, also with eatable fruit of a coral colour; *Crataegus lanacensis*, large yellow fruit. Then the *pink* and *scarlet-flowering Thorns*, and also the *double-flowering* varieties, white, pink, or scarlet. They are the sort of trees for "good ladies." While Lime-trees are very useful for screening shops and butchers' stalls.

FLOWER-GARDEN PLAN (C. M.).—Your plan will be engraved, and will appear in our series, with such remarks as will suit your inquiries. Your proposal of festooning the roses towards the centre is a new and distinct feature, of which we much approve.

PRESERVING GRAPES (Susan).—We have kept grapes until after Christmas, by allowing them to remain on the vine, giving as much air as the weather permitted, to keep them dry. Plants may be grown well in the same house, for directly the leaves of the vine begin to turn yellow they may be stripped off. Grapes keep longer on the vine than anywhere else.

GLAZING GREENHOUSE (E. E.).—Do not let the glass lap over more than one-eighth of an inch. We prefer the laps not to be close.

TAXODIUM SEMPERVERENS (D. P.).—There is some doubt about the identity of this tree, which is a native of North-West America, and that which is native of New Zealand. It is spoken of in the Horticultural Society's Journal as *Sagittaria semperverens*.

GRAPES IN COCHIN-CHINA FOWLS (Ibid.).—We are told that they are liable to this disease, but we have never witnessed it in our own yard, where they have dry, warm shelters, and are liberally fed. Your diet for them is good, and their roosting-place warm. Have they a covered dry place to shelter and bask themselves in when it is wet weather?

VARIOUS.—Notice will see he has been attended to.

SHORT NOTICES (J. B. P., Dublin).—You will perceive we have not lost sight of your request. We try to meet the case of every reader, so far as we know his wants and wishes, and never look upon anything as a trouble.

RUSTIC SEATS AND GATES (An Old Subscriber).—We shall be glad if any one will send us drawings of such as they think ornamental. We will not lose sight of this. *Notifera* can only be destroyed by being constantly cut down, and by sowing salt over them very thickly.

NAMES OF PLANTS (M. A. L.).—No. 1. *Nigella hispanica*; No. 2. *Ulmus campestris*, variety *variegata alba*; No. 3. *Phlomis frutescens*; No. 4 too much shrivelled to be detected. The Weeping Willow (*Salix Babylonica*) is a native of the Levant, and introduced to this country in 1780. The Weeping Ash is a variety of the common ash, propagated by grafting upon it.

INSECTS (Margate).—The insects sent as infesting old papers, closets, &c., are the *Phthorus holosericus*, a species which has quite recently been imported from Russia in dried skins. It has spread with amazing rapidity. It feeds on dried animal remains.—J. O. W.

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AUTUMN 1852.

A CATALOGUE OF DUTCH AND OTHER FLOWER ROOTS

IMPORTED AND SOLD BY

CLARKE AND COMPANY,

FLORISTS AND SEEDSMEN,

No. 86, HIGH STREET, OPPOSITE THE TOWN HALL, BOROUGH, LONDON.

(NEAR THE LONDON BRIDGE, TERMINUS.)

THOSE MARKED THUS * ARE EARLIEST AND MOST PROPER FOR GLASSES.

HYACINTHS.

DOUBLE END, OF DIFFERENT SHADES.

1 Bouquet Royale, fine rose... each	2
2 Bouquet Tendre, deep red (fine roots)	0
3 Belvedere, beautiful crimson	1
4 Betsy, light rose (large bells)	0
5 Belle Maria	0
6 Bruid's Kled, light rose, red eye	0
7 Catharine Victorieuse, splendid rose	2
8 Comtesse de la Coste, bright red (purple eye, large roots)	0
9 Dramonai Royale, bright red	0
10 Dendraght, large flower	0
11 General Moor, beautiful dark red	0
12 Zethoven, light red	0
13 Moreau, rose	0
14 Astorvorst, beautiful bluish (pink eye, fine)	0
15 Hecla, deep colour, large	1
16 Herilla, dark red	0
17 Hugo Grotius, deep rose	0
18 Lavater, deep rose (pink eye)	0
19 Lord Castlereagh, deep rose (fine)	0
20 La Superbe Royal, rose	0
21 Margurtha, light rose	0
22 Marquis de la Coste, fine red	1
23 Panorama, handsome dark rose (fine roots)	0
24 Prince Ross, rose	0
25 Prince Louise, fine red	0
26 Phoenix, red	0
27 Regina Victoria, splendid colour	1
28 Rex Rulorum, fine large striped red	0
29 Rosen Krans Van Flora, pink	0
30 Rose Mignon, rose (fine roots)	0
31 Rouge Charmante, delicate colour	0
32 Rouge Pourpre et Noir, splendid dark colour	0
33 Rouge Bleuante, splendid	0
34 Temple of Apollo, fine rose	0
35 Tracera, fine light	0
36 Velours, dull red	0
37 Walter Scott, striped red	2
38 Waterloo, fine deep red (large roots), first size	0
39	0
40 Fine Mixtures, large roots, per doz. 3	0

DOUBLE WHITE, OF DIFFERENT SHADES.

41 A-la mode, fine violet centre, each	0
42 Admiral Zoutman, rose eye	0
43 Altesse Royale, dark centre	0
44 Anna Maria, fine purple eye (splendid flower fine roots)	0
45 Belle Forme, red centre	0
46 Bijoux des Anna eurs, bluish, dark eye	0
47 Buceaurius, fine white	0
48 Candidus Villacrus, purple eye	0
49 Comtesse de Weiden, creamy white	0
50 Daguerat, rose eye (good roots)	0
51 Dendraght, yellowish white	0
52 Duc de Valois, purple eye	1
53 Duc de Berry, red eye	1
54 Duchesse de Bedford, bluish eye	0
55 Elise, very large flower, dark eye (new)	1
56 Francis, blue	0
57 Furlus Camillus	0
58 Gloria Forum, fine large flower	0
59	0
60 Grand Magdeburg, pure white	0
61 Grand Monarque de France, rose white (dark eye)	1
62 Herman Lange, purple eye	0
63 Hermoine, good flower	0
64 Jeanette, feathered centre (large flower), splendid root	0
65 Johanna, splendid large flower	0

S. d. DOUBLE YELLOW, OF DIFFERENT SHADES.

66 La Cherrie, blue eye	0
67 La Depe, yellowish white	0
68 Madam St. Simon, red eye	0
69 Maria Elizabeth	0
70 Minerva, pure white, fine	0
71 Matilda, yellowish white	0
72 Montessie, dark centre	0
73 Nanette, pure white	0
74 Og Reid de Baan, bluish eye (large bells)	1
75 Passie Virgo, purple eye (fine root)	0
76 Perandree, rose eye (large root)	0
77 Prince of Waterloo, pure white (splendid)	1
78 Pyrene, pure white (green tips)	0
79 Raad Van State (bluish white)	0
80 Sceptre d'Or, pure white (yellow centre)	0
81 Triumph Blandina, bluish (pink eye)	0
82 Violet Superbe, violet centre	0
83 Virgo, fine rose eye	0
84 Fine Mixtures, large roots, per doz. 3	0
85 A-la-mode, fine shaded (dark eye)	0
86 Aengaria, porcelain	0
87 Admiral de Baiter, dark eye	0
88 Activiteit, marbled blue	0
89 Azure Incomparable (azure)	0
90 Blackberg, immense flower	1
91 Bouquet Pourpre, dark indigo (green tips)	0
92 Belle Mode, fine light blue (large root)	0
93 Bride of Lammervuir, splendid colour	1
94 Buceaurius, fine porcelain	0
95 Commandant, fine dark blue	0
96 Comptesse de Salisbury, dark porcelain	0
97 Daguerat, handsome blue	0
98 Dames, very dark	0
99 Duchesse de Normandy, pretty flower	0
100 Don Pedro, good flower	0
101 Duc d'Angoulême, porcelain	0
102 Globe Terrestre, fine large bells (good root)	0
103 Graf Floris, good flower	0
104 Grand Sultan, light	0
105 Grand Monarque, light centre, large bells	0
106 Habu Brilliant, fine porcelain	0
107 Koon Van Indien, beautiful dark	1
108 Lord Noel, bluish grey (fine root)	0
109 Melin Amic, good flower	0
110 Lord Wellington, blue (dark eye, splendid root)	0
111 La Majestueuse, beautiful dark blue (green tips, splendid root)	0
112 La Renomee, fine purple	0
113 Mignon Dyrf houn fine large bouquet (fine root)	0
114 Mirror	0
115 Pantheon, fine striped	0
116 Passie Tout, handsome shaded blue, fine	0
117 Paraboat, porcelain blue	0
118 Pourpre Superb (indigo)	0
119 Prince of Saxe Weimar, deep blue (large truss)	0
120 Prins Hendrik von Prussen, dark eye	0
121 Robin Hood, green tips	0
122 Saint Joseph, beautiful	0
123 Rudolphus, large dark flower	0
124 Sans Souci, fine light blue	0
125 Sarcophagus, fine light blue	0
126 Tufal Omi, purple	0
127 Violet Fonce, dark	0
128 Fine Mixtures, large roots, per doz. 3	0

SINGLE REDS.

140 Amiable Rosette, pretty rose	0
141 Amiable Dorothea, fine rose	0
142 Adelaide, red	0
143 Belle Helene, crimson	0
144 Belle Quirine, extra fine	1
145 Charlotte Marianne, fine bright colour (fine root)	0
146 Cornelia, light rose	0
147 Ibbits, excellent bright red	0
148 Diana, beautiful pink	0
149 Eclaircie Parfait, bright rose	0
150 Felicitas, pale pink	0
151 Hermetid Vrede, deep pink	0
152 Jacqueline, fine red (large root)	0
153 Johanna Christina, fine	0
154 La Balene, large bluish	0
155 L'Ami de Coeur, bright red (large root), first size	0
156	0
157 La Fortune, light red	0
158 La Victoire, shining red	0
159 Lord Wellington, pink, very fine (splendid root)	0
160 Lord Byron, deep rose (large truss)	0
161 L'Honneur Sassenheim, fine	0
162 Madame de Lac, splendid rose	0
163 Madam Barnard	0
164 Mars, beautiful deep red	0
165 Molliere, new and fine	0
166 Paix d'Amiens, rich deep pink (fine root)	0
167 Princess Sophie, striped	0
168 Pax purpurea, purplish rose	1
169 Prins Albert von Prussen	0
170 Prontjewel	0
171 Rouge Louisiane, light red	0
172 Sir Charles Napier, new and splendid	0
173 Talma, deep rose (large bouquet)	0
174 Temple of Apollo, light pink	1
175 Thalia, rose	0
176 Fine Mixtures, large roots, per doz. 3	0

SINGLE BLUES.

206 Appius, very dark blue (fine root)	0
207 Baron Van Tuyl, beautiful dark porcelain (splendid root)	0
208 Belle Brunette	0
209 Bonaparte, dark blue (white striped)	1
210 Camper, shaded lilac	0
211 Conqueror of the World	1
212 Emigue, splendid dark blue	0
213 Enallux, fine dark porcelain	0
214 Fleur Parfaite, dark striped	0
215 Graf Van Nassau, fine striped centre	0
216 Grand Vidette, very fine porcelain	1
217 La Belle Africaine, black	1
218 L'Amie de Coeur, splendid dark blue, first size	0
219 L'Amie de Coeur, second size	0
220 Lord Auckland, light blue	0
221 Lord Nelson, dark porcelain	0
222 Madam La Valliere, fine dark blue (splendid)	0
223 Mantau Bleuazure	0
224 Marie Beaumont, very dark	0
225 Maria de Medicis, new, black	10
226 Mon Egal, fine blue	0
227 O'Connell, very fine porcelain	0
228 Orontides, fine porcelain (splendid root)	0
229 Pense Nephelaeus, black	0
230 Prontjewel, light blue	0
231 Sticks General, dark blue	0
232 Thaler, fine dark (fine root)	0
233 Tyra, fine porcelain	0
234 La Plus Noire, fine flower (large root)	0
235 Vulcan, very dark	0
236 Fine mixed ditto, large roots	0
237 Adonia, good yellow (large root)	0
238 Alvarino, dark citron	0
239 Beauté Jaune	0
240 Colour de Jonguille, good yellow (fine root)	0
241 Canary Bird, the finest yellow	1
242 Herons, true yellow	10
243 La Belle Jaune, light citron (large root)	0
244 La Plus d'Or, dark citron (ditto)	0
245 Le Chasseur, true yellow	0
246 Pompe Triumphant, very fine, true kind	0
247 Couronne d'Audan, dark	0
248 Tolson d'Or, very fine	0
249 Kaiser Alexander	0

JONQUILS.

250 Double, largest size	per doz. 3
251 Second size, double	0
252 Single sweet-scented	0
253 Campernelle	0

CONTINUED ON NEXT PAGE.

Clarke and Company's Catalogue of Dutch and other Flower Roots—continued.

NARCISSUS.

254	Gloria Mundi, yellow	per doz.	3
255	Iditto ditto, white	per doz.	3
256	Double white, sweet-scented	per doz.	3
257	Grand Monarque	per doz.	7
258	Grand Primo	per doz.	7
259	Grand Sovereign	per doz.	7
260	Grand Phoenix	per doz.	7
261	Poeticus	per 100	4
262	Polyanthus, mixed white per doz.	3	
263	— yellow	3	
264	Primo Citronior	7	
265	Soliel d'Or	3	
266	Double Roman	3	
267	Paper White, Italian	3	
268	Van Sion	2	

EARLY TULIPS.

269	Clarimond, striped rose	per doz.	5
270	Dur Van Thol, red with yellow	per doz.	10
271	Potrebekker, white	per doz.	10
272	Florentine, sweet-scented, yellow	per doz.	10
273	Fine Mixed	per doz.	10
274	Royal Standard, white with red	per doz.	10
275	Ramsen, yellow with brown	per doz.	10
276	Belle Alliance, white with crimson	per doz.	10
277	Dur de Orange, orange	per doz.	10
278	Cerise Ractide, crimson	per doz.	10
279	La Plume d'Or, yellow	per doz.	10
280	Panorama	per doz.	10
281	Pax Alba, white	per doz.	10
282	The Swan, pure white	per doz.	10

DOUBLE TULIPS.

283	Dur Van Thol, red with yellow	per dozen	10
284	Marriage de ma Fille, red with white	per dozen	10
285	Rex Rubrum, deep red	per dozen	10
286	Tournekol, yellow with crimson	per dozen	10
287	Best Mixed	per dozen	10
288	Yellow	per dozen	10
289	La Candeur, white	per dozen	10
290	Duke of York, red with white	per dozen	10
291	Cornuta (Chinese)	per dozen	10
292	Bien Fleete	per dozen	10
293	Gloria Solus, red with yellow	per dozen	10
294	Bonaparte, dark	per dozen	10
295	Purple Kroon, purplish brown	per dozen	10

PARROT TULIPS.

296	Admiral de Constantinople	per dozen	1
297	Belle Jaune	per dozen	1
298	Mixed	per dozen	1
299	Monatze Rouge	per dozen	1
300	Perfecta	per dozen	1

GLADIOLUS.

301	Colvilli	each	4
302	Tristia Prucor	each	4
303	Ramona, fine	each	4
304	Byantina	each	4
305	Cardinalis	each	4
306	Communis Flore Alba	each	4
307	Communis	each	4
308	Floribunda	each	4
309	Gandavensis	each	4
310	Pettitius	per doz.	1
311	Rubra	each	4
312	Insignis	each	4

CROCUSES.

313	Large Yellow Dutch, 1st size	per 100	2
314	Large Blue ditto	per 100	2
315	Large White ditto	per 100	2
316	Small Yellow ditto	per 100	2
317	Cloth of Silver ditto	per 100	2
318	Cloth of Gold ditto	per 100	2
319	Queen Victoria ditto, pure white	per 100	2
320	Dutch Mixed	per 100	2
321	Scotch Mixed	per 100	2
322	Versicolored ditto	per 100	2
323	Yellow Dutch, 2nd size	per 100	2
324	Yellow English	per 100	2
325	Fifty splendid new named sorts	per 100	2
326	David Hassio, purple	per 100	2
327	New Grand Gold Yellow	per 100	2
328	No Plus Ultra, very superior blue	per 100	2

KANUNGULUS.

329	Good Mixed	per 100	3
330	Scotch Seedlings Mixed, fine	per 100	3
331	Scarlet Turban	per 100	3
332	Black ditto	per 100	3
333	Golden	per 100	3
334	Named in 20 fine sorts	per 100	3
335	Ditto 100 splendid new sorts per doz.	2	
336	Seraphique, or Citron Turban per 100	6	

ANEMONES.

337	Best double superior and new sorts	per lb.	5
338	Fine double mixed	per lb.	5
339	Fine double scarlet	per lb.	5
340	Fine single	per lb.	5
341	Ruphrine, splendid bright blue	per doz.	2
342	High Admiral, true, finest double scarlet	per doz.	2
343	Josephine, double red, fine	per doz.	2
344	Reine Esther, dark crimson	per doz.	2
345	Emperor Alexander, very fine double	per doz.	2
346	Couleur de Sang, splendid	per doz.	2
347	Named in 50 very superior choice new sorts	per 100	16

LILIES.

348	Belladonna	each	9
349	Constantinople Martagon	each	9
350	Guernsey	each	9
351	Jacoba	each	9
352	Japanicum, true, or Brown	each	9
353	Scarlet Martagon	each	9
354	White ditto	each	9
355	Purple ditto	each	9
356	Yellow ditto	each	9
357	Tiger	each	9
358	White	each	9
359	Maratagon, mixed	per doz.	4
360	Lilium Lancifolium Babrup, or Spacium	each 2s to 5s	
361	Punctatum	Album	1
362	—	Album	1
363	—	Album	1
364	—	Album	1
365	—	Album	1
366	—	Album	1
367	—	Album	1
368	—	Album	1
369	—	Album	1
370	—	Album	1
371	—	Album	1

ANARYLLIS.

372	Atamasco	each	9
373	Johnsonii (true)	each	9
374	Longifolia (true)	each	9
375	Alba	each	9
376	Lutea	each	9
377	Uniflora	each	9
378	Vittata (true)	each	9
379	Formosissima	each	9

IRISES.

380	A beautiful collection of English Iris, by name, 25 sorts, per doz.	3	
381	Ditto, mixed	per doz.	3
382	A beautiful collection of Spanish, by name	per doz.	3
383	Ditto, mixed	per doz.	3
384	Persica, or Persian	per doz.	3
385	Pavonia, or peacock	per doz.	3

IXIAS.

386	A beautiful collection, by name	per doz.	4
387	Capital mixtures	per doz.	4

CYCLAMEN.

388	Persicum, very fine	each	1
389	Kuropeum red	each	1
390	white	each	1
391	Coum	each	1

LATE TULIPS.

392	Fine mixed, from named flowers,	per 100	10
393	Excellent border mixtures	per 100	10
394	Named Fancy Varieties, a superb collection	per 100	10

DENS CANIS, OR DOG'S TOOTH VIOLETS.

395	White	per doz.	3
396	Red	per doz.	3
397	Purple	per doz.	3
398	Mixed	per doz.	3

ROOTS OF VARIOUS KINDS.

399	Allium Lilium	per doz.	2
400	Milly Floe Lutes	per doz.	2
401	Aram Maculatum, spotted	each	1
402	Anthyllus, in varieties, named,	per doz.	6
403	Achimenes of Sorts	per doz.	6
404	Astromeris, in variety	per doz.	6
405	Asclepias Tuberosa, a splendid head of very striking orange-coloured flowers, and grows about 4ft. high, and altogether remarkably showy	per doz.	1
406	Crown Imperialis, mixed, per doz.	3	
407	Named Crown Imperialis, in 12 sorts	per doz.	7
408	Cypella Herbertii	per doz.	5
409	Double Snowdrops, Roots large	per 100	2
410	Tuberosa	per doz.	3
411	Ferraria Conchiflora	per doz.	4
412	Pavonia	per doz.	2
413	Fritillaria Melegris mixed	per doz.	2
414	Farmaria Bulbos	per doz.	2
415	Fritillaria Persica	per doz.	5
416	Gloria's Fine Sorts	per doz.	1
417	Grape Hyacinths	per doz.	3
418	Pancratium Martimum	per doz.	1
419	Summer Snowflakes	per doz.	1

HYACINTHS IN ASSORTMENTS.

420	Star of Bethlehem	per doz.	3
421	Sella Campanata Major	per doz.	4
422	Minor	per doz.	4
423	Hyacinthoides	per doz.	4
424	Pavonia Alba	per doz.	9
425	Cornules	per doz.	9
426	Tropeolum Tuberosum	each	0
427	Tropeolum	each	0
428	Tigridia Speciosa Nova	per doz.	2
429	Tulipa Clusiana	per doz.	4
430	Persica	per doz.	6
431	Tropeolum Grandiflorum	each	1
432	Winter Aconite	per 100	3

N.B.—In giving Orders for the above Assortments, it is requested to state whether they are required for glasses, pots, or the open ground.

Compte de Paris Strawberry	per 100	4
Cuthill's Black Prince ditto	per 100	4
Fertilized Haulbush ditto	per 100	4
Kreen's Seedling ditto	per 100	4
Myatt's Eleanor ditto	per 100	4
British Queen ditto	per 100	4
Victoria Rhubarb	each	0
Linnæus ditto	per 100	1
Mitchell's Albert ditto, very choice	per 100	1
True Pastoph Raspberries	per doz.	2

SEEDS, ETC.

Canary	per quart	0
Fine New Giant Bye	per gallon	1
Trifolium Incarnatum, or Scarlet Trefoil	per lb.	0
Winter Tare	per peck	2
Rye Grass	per quart	0
Haricot Beans	per quart	0
Hemp	per pint	0
Maw Seed	per pint	0
Mushroom Spawn	per brick	0
Rape	per quart	0
Soup Celery Seed	per lb.	1
Garlic	per lb.	0
Shallots	per lb.	0
Mats, large Russia	per 100	1
Wood Garden Labels	per 100	0
Guano Peruvian, in packages 6d and 1s each	per 100	2
Zinc Labels, very neat for pots per 100	per 100	2
Indelible Ink for Writing on the Zinc Labels	per bottle	0
Superphosphate of Lime, a fine Manure for Flowers, 7lb. for 1s	per 100	1
Early Double-blossom France Peas	per doz.	1
Warner's Emperor Peas, Early Long-pod Beans	per doz.	1
Wood's Frame and Long Scarlet Radish	per doz.	1

October to December is considered the proper time for planting Hyacinths, either in Beds, Pots, or placing them in Glasses to Bloom in Water.

CLARKE AND CO. take this opportunity of calling attention to a novel and successful plan of growing Bulbs, in Glass Dishes, the Dishes being filled with Sand and Moss; the Bulbs of Hyacinths and other roots, such as flower at one period, are planted in them, and kept moderately damp and have been found to succeed admirably for in-door cultivation, and form a beautiful appearance when in bloom.

Large Dishes, containing 4-doz. Hyacinths of different colours, and a proportionate quantity of Narcissus, Tulips, and Crocuses, complete for	10s. 6d.
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Small Size Dishes	4 0

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AND

COUNTRY GENTLEMAN'S COMPANION.

CONDUCTED BY GEORGE W. JOHNSON, ESQ.

No. 211, & INDEX.]

THURSDAY, OCTOBER 14, 1852.

[PRICE 3d.]

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TO ADVERTISERS.

THE COTTAGE GARDENER is supplied to about six thousand families of the Nobility, Clergy, and Gentry of the United Kingdom, to say nothing of the other parties among whom it circulates, both weekly and monthly. So large is its circulation among the superior classes, that a considerable portion of its contents have been modified gradually to meet their requirements. The classes among whom our work circulates includes those important ones, the Professional, as well as Amateur Gardeners, Country Gentlemen, and Country Clergymen, indeed few families of distinction, interested in rural affairs, are without THE COTTAGE GARDENER. There is not the slightest exaggeration in this statement, and we urge it upon Advertisers, not for the sake of our own advantage only, but because we know what our readers wish for, and that Nurserymen, Florists, and Tool Makers, more especially, will find it a remunerative medium for their advertisements. From the confidence with which our Periodical is received in the family circle, it has few equals also as a vehicle for announcements referring to Articles of Household Utility, Life Assurance, Investment Associations, and other objects of general interest.

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—Open to all England.—The First Annual Exhibition of this Society will be held at Hitchin, on the 20th, 22nd, and 23rd of November, 1852, when Prizes amounting to upwards of £50 will be offered for public competition.

Hitchin is a first-class Station on the Great Northern Railway, 30 miles from London, at which Station is a Junction with the Cambridge and Eastern Counties Railway. Regulations and Prize Lists may be had on application to the Secretary, by enclosing two postage stamps. Entries for Exhibition close on the 6th of November. Admission to the Private View on Saturday, November 20th, by a 5s. ticket (not transferable), which will be available for the three days of Exhibition. And on Monday the 22nd, or Tuesday the 23rd, 1s. each.

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WEEKLY CALENDAR.

M D	W D	OCTOBER 14—20, 1882.	WEATHER NEAR LONDON IN 1881.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock half Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
14	Th	Lady-bird hibernates.	29.928—29.841	62—44	W.	.03	25 a. 6	7 a. 5	6 a. 7	1	14 1	288
15	F	Gosamer abundant.	29.450—29.336	58—33	W.	.34	26	8	6 35	2	14 14	289
16	S	Martin last seen.	29.606—29.488	57—28	S.W.	—	28	8	7 7	3	14 26	290
17	Sun	18 SUNDAY AFTER TRINITY.	29.994—29.889	57—36	W.	—	30	1	7 40	4	14 38	291
18	M	St. LUKE.	29.941—29.749	49—53	S.W.	.01	32	17	8 43	5	14 50	292
19	Tu	Virginian Creeper leaves fall.	29.011—29.999	63—55	S.W.	.01	33	17	9 44	6	15 0	293
20	W	Hen Chaffinches flock.	29.080—29.045	61—55	W.	—	35	55	10 53	7	15 10	294

METEOROLOGY OF THE WEEK.—At Chislewick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 56.7° and 41.9° respectively. The greatest heat, 76°, occurred on the 14th in 1845; and the lowest cold, 24°, on the 15th in 1850. During the period 161 days were fine, and on 74 rain fell.

BRITISH WILD FLOWERS.

BERBERIS.—BERBERIDACEÆ.

CHARACTERS OF THE ORDER.—*Sepals* 3, 4, 6, deciduous, in a double row, surrounded externally by petal-like scales. *Petals* below the seed-vessels, either equal to the sepals in number, and opposite to them, or twice as many, generally with an appendage at the base in the inside. *Stamens* equal in number to the petals, and opposite to them; *anthers* generally with two separate cells, opening elastically with a valve from the bottom to the top. *Ovary* solitary, one-celled; *style* rather lateral; *stigma* globular. *Fruit* berried or capsular. *Seeds* attached to the bottom of the cell on one side, 1, 2, or 3; *albumen* between fleshy and horny; *embryo* straight in the axis. *Shrubs* or *herbaceous perennial* plants, for the most part smooth.

BERBERIS: Berberry; Barberry.

GENERIC CHARACTER.—*Calyx* below seed-vessel, of six spreading, reversed egg-shaped, concave, coloured, deciduous leaves; the three outer ones smallest. *Petals* six, opposite to the calyx, and not much longer; roundish-egg-shaped, concave, spreading, deciduous; the short claw of each bearing internally two oblong, more deeply coloured, probably, honey-bearing glands. *Filaments* linear, flattened, blunt, opposite to the petals, but shorter, attached to the base of each. *Anthers* of two separate lobes, on the opposite edges of the summit of the filament, each opening by a valve, from the bottom upwards. *Germen* oblong-oval. *Style* none. *Stigma* single, globular, broader than the germen, acutely bordered, permanent. *Berry* oblong, blunt, of one cell, pulpy, opening at the top. *Seeds* two or three, oblong, cylindrical, erect, attached by short stalks to the lower part of the cell.



BERBERIS VULGARIS: Barberry; Pipperidge Bush.

Description.—It is a deciduous shrub attaining the height of eight or ten feet. *Stems* upright, branched, bark ash-coloured, slightly grooved, yellow inside, armed with sharp thorns, usually in threes. *The first leaves* are reversed egg-shaped, finely tooth-edged. *Stipules* terminating in a hair-like tooth. *Stem-leaves* alternate, the lowest slightly lobed, with spiny teeth. *Secondary leaves* in pairs, oblong, and saw-edged, and between the lower leaves and the thorns are

smaller leaves. *Flowers* towards the end of the branches, in drooping bunches, or racemes, with a bracte to each flower-stalk. *Petals* yellow, frequently saw-edged, with two orange-coloured nectaries at their base. *Anthers* roundish and yellow. *Stigma* greenish. *Berries* at first green, but when ripe a brilliant scarlet, cylindric-egg-shaped, rather bent with a brown perforated projection at the end, and very acid. *Seeds* usually two, rarely three, loose in the berry, except slightly fastened to it at the bottom, oblong, thicker at the top, smooth, reddish, and hard.

There are many varieties, some being without seeds; others with white, yellow, purple, or black berries.

Places where found.—In hedges, and on bushy, chalky-soiled hills.

Time of flowering.—May and June.

History.—Its British name is the Pipperidge, or Pipperidge; the Botanical one, and its corruption, Barberry, being borrowed from the Arabia. When the anthers are thoroughly ripe, if the base of the filament be irritated with a pin, or a bristle, the stamen rises with a sudden spring and strikes the anther against the summit of the pistil, affording a remarkable instance of one of the means used to perform the important office of impregnation. This singular vitality of fibre, which we denominate irritability, and which is particularly apparent in such plants as are called *sensitive*; excited the attention of that very ingenious experimentalist Kälreuter, who observes that the cells of the anthers do not split open lengthways, but that the outer coat detaches itself along the edges of the partition, which separates the two cells, and raising itself up with the greater portion of the pollen adhering to the inner surface, finally faces towards the stigma; having the inner surface that fronts the stigma covered with pollen. It is by this beautiful, expedient that nature has so completely succeeded in her object of fecundation by the emission of pollen; for by this mode of opening of the anthers the stamens have gained so much in length, that they are enabled to reach with precision the stigma on which they are to discharge their contents; had the cells opened in the usual way, the stamens would have been too short for their intended functions. And here we may well exclaim with Cowley,

"If we could open and imbend our eye,
We all, like Moses, should espy,
Ev'n in a bush, the radiant Deity."

When a stamen has gone through this movement, it draws the petal to the base of which it is fixed a little toward itself, and this is the reason why, when we have suddenly stimulated all the stamens of a flower that was before nearly expanded, we see it half closed again. The anthers are insensible to stimulus; the filaments evince most irritability nearest their base. The phenomenon may be fully induced by a burning lens; and when the flowers are electrified, and sparks are drawn from them by the approach of a metallic body, the stamens immediately spring toward the pistil. If it could happen that during the season of bloom the flowers were to remain uninfluenced by adventitious stimulus, the stamens would continue extended at their wonted distance from the pistil, and no fecundation could take place. But let us see the means adopted by Divine Wisdom for insuring the fecundation of this useful vegetable. Each petal has near its base two oblong honey-bearing glands. Between every two of these glands a stamen is placed, so that whenever an insect (of which abundance present themselves in the course of a day, beetles, flies, bees, and wasps, seeking

their own food), attempts to extract the honey exuded by the glands, it must touch, especially the lower, and most irritable part of the filament, upon which this organ immediately springs up and proceeds to cover with its prolific dust the upper part of the pistil. A process nearly analogous may be observed in *Aristolochia*, *Orchis bifolia*, and some few other indigenous instances: capriciousness has been long known to afford remarkable exemplification among exotics.

The leaves are gratefully acid. The flowers are offensive to the smell, when near, but at a proper distance their odour is extremely fine. Dishes for the table are often garnished with bunches of the ripe berries. They are so very acid that birds will not eat them, but boiled with sugar they form a most agreeable rob or jelly. They are used likewise as a dry sweetmeat, and in sugar plums. An infusion of the bark in white wine is purgative. The roots boiled in lye, dye wool yellow. In Poland leather is dyed of a most beautiful yellow with the bark of the root. The inner bark of the stem dyes linen a fine yellow, with the assistance of alum.

An opinion is entertained by many who deserve attention,

sustained as they are by some facts, that the Barberry causes wheat growing near to it to be attacked by the mildew. On the other hand, there are many evidences that wheat may be grown in its vicinity without being so affected. It is quite certain that the yellow parasitical fungus found on the leaves of the Barberry, is not the fungus that is the cause of the mildew. They are not only different species, but of different genera; that on the Barberry being *Æcidium Berberidis*, and that on the wheat is *Puccinia graminis*.

The peculiar constituent of the bark of the Barberry, which renders it not only a powerful tonic in medicine, but useful as a dye, has been named *Berberite*. It was first obtained pure by M. Puchner, in 1836. He administered it to some of his patients, in doses of ten grains, and found it a powerful tonic. Berberite answers very well as a dye-stuff, giving a fixed yellow colour without any mordant. Chloride of tin improves the colour. When the cloth is previously impregnated with sulphate of copper, a beautiful greenish-yellow colour is obtained. With nut-galls the colour is yellowish-brown. (Lindley, & Smith. Martyn. Withering. Thomson.)

THE EDITOR OF THE COTTAGE GARDENER, as one of the Honorary Secretaries of *The Winchester and Southern Counties Society for the Encouragement of Poultry*, will be greatly obliged by subscriptions being forwarded to him. Every subscriber of five shillings or upwards, thereby becomes a member, and every one wishing to become a member is requested to forward his or her subscription immediately. This is desirable, because the amount of prizes at the *Society's first Exhibition*, to be held on or before the first of December next, will be increased in proportion to the Society's funds.

The following excellent classification, first arranged by the Birmingham Society, is that also adopted by *The Winchester and Southern Counties Society*.

<i>Spanish.</i>	<i>Polands</i> ; black, with white crests.
<i>Dorking</i> ; single-combed.	<i>Polands</i> ; golden, with ruffs or beards.
<i>Dorking</i> ; double or rose-combed.	<i>Polands</i> ; golden, without ruffs or beards.
<i>Dorking</i> ; white.	<i>Polands</i> ; silver, with ruffs or beards.
<i>Cochin-China</i> ; cinnamon and buff.	<i>Polands</i> ; silver, without ruffs or beards.
<i>Cochin-China</i> ; brown, and partridge-feathered.	<i>Any other distinct breed.</i>
<i>Cochin-China</i> ; white.	<i>Bantams</i> ; gold-laced.
<i>Malay.</i>	<i>Bantams</i> ; silver-laced.
<i>Game</i> ; white and ples.	<i>Bantams</i> ; white.
<i>Game</i> ; black-breasted, and other reds.	<i>Bantams</i> ; black.
<i>Game</i> ; blacks, and brassy-winged, except greys.	<i>Bantams</i> ; any other variety.
<i>Game</i> ; duck-wings, and other greys and blues.	<i>Pigeons.</i>
<i>Golden-pencilled Hamburg.</i>	<i>Geese.</i>
<i>Golden-spangled Hamburg.</i>	<i>Ducks.</i>
<i>Blue-pencilled Hamburg.</i>	<i>Turkeys.</i>
<i>Black-spangled Hamburg.</i>	<i>Guinea Fowl.</i>

Sir.—Take them as a body, gardeners are very droll dogs. They have the bump of obstinacy, and the bump of self-esteem. Gull and Spurzheim tell us that these bumps may be exchanged for other and better bumps, provided the party owning them will read or listen to advice. In plain English, if a conceited man leaves off being conceited, the bump of conceit or self-esteem would subside, and give place to the bump of inquisitiveness.

What strides the gardeners in moderate establishments would make, if they could once succeed in being desirous to learn, in place of having an idea that they know more than any body else.

Since I first had a gardener, now some twenty-five years ago, every one who has lived with me has had this unfortunate "bump of conceit," which has always been a great

hindrance to him in his work, and always, in my experience, ended in a change. My present gardener is as obstinate a dog as you can well imagine. I read very regularly and very carefully, week by week, *THE COTTAGE GARDENER*, and mark every thing I think worth notice, for my man, and at the end of the week, when I go round the garden with him to see what has been done, and what will require to be done, I hand him over your invaluable little work, offering to him some remark upon the various items which have been noted for his perusal. I always get the same answer—

"It's all very well for them gents to write, but I know a great deal more than they do. They only put things in their paper to mislead, and then of course when our master reads them, he sucks it all in for truth, and that's the way so many poor gardeners are turned adrift."

In vain I have told him, that Mr. Beaton, Mr. Errington, Mr. Appleby, Mr. Fish, and all the other parties who write in *THE COTTAGE GARDENER*, do so with a sincere desire not to mislead, but to instruct and encourage both the old and the young. I have even myself taken the trouble to follow out, under my own superintendence, some hints thrown out by your able contributors. Success has always attended my efforts, but

"A man convinced against his will,
Remains of the same opinion still."

And so it is with my man; and yet the man is industrious, but his industry is very often lost for want of that bump of inquisitiveness; and nothing, I believe, but a new race of men, will ever correct the evils and heart-burnings which must arise between master and man.

The life of a common working gardener is, I am quite aware, against an increase of knowledge. He labours from Monday morning to Saturday night, and has only Sunday to refresh and recruit his strength and ideas. I have tried a different system; I give my man four set holidays in the year. I send him on those days either to Kew, Chiswick, Regent's Park, or Rosherville Gardens, pay all his expenses, and tell him to pick up some new ideas, and come back as lively as a lark.

Last year, I sent him and his wife to the Crystal Palace, and desired him, as a matter of course, to look at all the new garden things there, with a view to his improvement, and my benefit. When he came home, I asked him how he liked the place, and what he saw, his answer was—"Nothing new of note in the garden line." And the only things he thought well of, were the warlike weapons! The man is young (only 32), but his ideas are fixed, and nothing seems to stir him up, and if I were to change him for another, I might, by trying to jump out of the frying-pan, just jump into the fire.

Now, what I want you to do, Mr. Editor, is to write pretty regularly some paper on this sad subject, for I know nothing more disheartening to a gentleman, than continually seeing new faces, without getting even a change of ideas.

If I were not engaged all day, and every day, in business, I would only have a good, honest, willing, steady, and hard-working labourer, rather than a man calling himself a gardener. Plain directions, and a little common sense,

would do much, for nature is always ready to give plenty, if due diligence is used.

Once more, therefore, good Mr. Editor, have the goodness to do your best to improve this obstinate race of beings, you would add to their happiness, and to our comfort as masters, and you would be raising your journal high in the scale of usefulness.

A CITY FARMER.

SUCH is the letter we have just received from a gentleman whom we know to be a man of sterling sense, and an indulgent master, but we are glad in the conviction that there are not many cases similar to his own, for we have little power to help the employers of such gardeners as our friend endures. We cannot undertake the office of censor of gardeners, any more than we can undertake to educate them. All that we profess to do, is to prepare weekly information appropriate to the season, conformably to the best gardening knowledge of our time, and to answer such questions as are addressed to us.

That information, and the answers to such questions, are given by some of the best practical gardeners of the day; and we can state, without any possibility of contradiction, that whoever has adopted their recommendations carefully, never failed in obtaining his object. Now, if a gardener, who has had none of the advantages which are possessed by our departmental writers, thinks that he knows as much as they do, and spurns at the information they can give, we can only pity him as a man that of all others is most hopeless of being improved, for he is not only ignorant, but is ignorant of his ignorance. Such a man, perhaps, will be surprised to hear, that there is a correspondence continually being carried on between the most skilful of British gardeners, who seek from each other advice, and suggestions, and information, when they are carrying out new plans, and when they encounter difficulties. Such men come also to THE COTTAGE GARDENER'S pages, and one of the most distinguished of them has said that he never took up one of our numbers without benefiting by some of its information.

We claim no especial merit for this, because from the worst of publications some instruction must be gleaned. Above all, we have not the presumption to attempt to instruct gardeners. We address ourselves to the amateur, and we advise him, as in the case before us, never to attempt to teach his gardener. There are always modes of conveying our wishes, without making it conspicuous that a man does not know his business, and if he carried our wishes into effect, we should never enquire whence he derived the necessary knowledge, or what means he adopted. We may have plans of his own, and whilst we are quite alive to what results the master has a right to require, we are quite as sensible that as the responsibility of failure rests upon the gardener, the means to be adopted should be left to him. Mrs. Ashton Smythe, it is said, requires grapes in the desert every day of the year, and Mr. Sanders, the gardener at Tidworth, regularly supplied the demand, but his employer never thinks of dictating how it shall be done. If however, Mr. Sanders did not know how to effect such a succession, and refused to be instructed

how Mr. Fleming, of Trentham, accomplishes the same object, then we should say he failed in his duty, and was unworthy of his position.

COVENT GARDEN.

I must not forget that in my last paper I promised to refer more at length this week to several subjects that were only alluded to in the report of last. And of these, the first we shall notice are those varieties of fruits which are most likely to be soonest over, and which are not likely to come under our observations again this season. The *Hessle Pear*, which we referred to last week, and which we observed is not "Hazel," as written by Lindley, nor "Hessel," as in the Horticultural Society's Catalogue, is a variety which was first discovered at the village of Hessle, near Hull, in Yorkshire. It does not rank as a first-rate pear, nor is it to be compared to many others of the same season; but being an immense bearer, and a respectable-looking article for the popular eye, it is admirably adapted for market-gardeners and orchardists. The tree is of very graceful habit, having slender pendulous shoots, of a very dark-purplish-black colour, and may easily be distinguished from every other variety by its characteristic appearance. *Louise d'Avranches*, and not "Louise Bonne de Jersey," as it is now erroneously called, is one of the very best and most delicious of our autumn desert pears. There have been a few of them in the market during the week, but ere our next report is written their season will be over. It is generally stated, by writers on pomology, that the origin of this variety is unknown; and having been introduced to this country from Jersey under the name of "Louise Bonne," it was, to distinguish it from the old *Louise Bonne* of Dubamel, called "Louise Bonne of Jersey." But its proper name is *Louise d'Avranches*; and all who value correctness of nomenclature, may take my authority, if they think it worth taking, for stating that it was raised by a M. Lougueval, of Avranches, and the original tree is still in existence in the garden Rue St. Germain, and now in the possession of M. Le Clerc.

Of APPLES there has been a good supply during the week, and the demand has been very brisk. Sorts, which the week previously, made 2s. 6d. and 3s. per bushel, have last week been sold for 4s. and 5s. And who do our readers imagine is the cause of this great and sudden rise? The Michaelmas goose. "I could a sold twice as many as I had, sir, if I could a got 'em," said a salesman to me. "I never see things go off as they did, never, all my life." The sorts which were in the market were—*Emperor Alexander*, *Alfriston*, *Hansel Souring*, *Golden* and *Winter Pearmain*, *Scarlet Pearmain*, *Nonnuch*, and many lots of mixed varieties.

The FRUITS which have been most plentiful, are *Bishop's Thumb*, but they were generally very small, and inferior in quality, their flavour being styptic. *Swan's Eggs* have made their appearance, but only to a small extent; there being only a few bushels of them offered. Everybody knows the *Old Swan's Egg*, as one

of the most highly and peculiarly-flavoured of our old English varieties. The *Brown Bourré* is also among the arrivals of the week, and is now just coming into perfection. Many of our readers may not know, and a great many have never heard of this fine old pear. It is a French variety, which has been held in high estimation by the horticulturists, both of this country and the Continent for the last two centuries; but as it requires the protection of a wall to bring it to perfection, it is not so generally cultivated, nor so widely known as it would have been had it been better adapted to general cultivation in this country. The prizes which pears have made last week are also considerably in advance of the former. The cold weather is now driving our London population from their summer to their winter quarters, and consequent; the demand and consumption becomes every day greater.

There is nothing new in the way of PLUMS from what was recorded last week, except a few *Reine Claude Violette* or *Purple Gage*, a fruit, which some of our readers will perhaps be astonished to find me say, I prefer to the green gage. Whether grown upon a wall, or as a standard in a suitable situation, and allowed to hang till it is "dead-ripe," that is, till it begins to shrivel, it is one of the most delicious sweetmeats which the most delicate palate could desire; but it must not be confounded with the "blue gage," a very different and inferior variety.

There have been some very fine GRAPEs exhibited during the week, and particularly a few bunches of large well-grown *Canon Hall Muscats*, which were sold at 5s. and 6s. per pound. The *Black Hamburgs* continue at last week's quotations.

CUCUMBERS have been very plentiful, and some of them very good and cheap. I observed a lot varying in length from twelve to eighteen inches, from 2d to 6d, and 9d. each. FILBERTS plentiful, at 9d. per pound. TOMATOES, 4s. to 5s. per half-sieve, or 8d. per punnet, containing eight or nine large ones. CAPSICUMS, long red, 6d. per dozen. MUSHROOMS are very plentiful and very large, and fetched from 8s 6d to 5s. per bushel.

Our FLOWERS are, of course, not so plentiful now as they were earlier in the season; they consist of both in- and out-door plants. As an illustration, I shall give the following constitution of a large and handsome bouquet.—*Double White Camellia*, *Double Chinese Primroses*, *Geraniums*, *Scarlet Geraniums*, *Azalea indica alba*, *Mignonette*, *Heliotrope*, *Gardenia*, *Verbenas*, *Pinks*, *Saffraho Rose*, and fringed round the outside with leaves of the *Oak-leaved Geranium*. Of the common kinds there are lots of *Dahlias*, *China Asters*, *French and African Marigolds*, *Fuchsias*, &c.

Again we must leave much of what we should like to have noticed till another week. H.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us ad-

ditions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

BURY ST. EDMUNDS, Nov. 26 (*Chrysanthemums*), (Sec. G. P. Clay, Esq.)

CALEDONIAN (Inverleith Row), Edinburgh, Dec. 2.

HAMPSHIRE, Nov. 18 (Winchester), (Sec. Rev. F. Wickham, Winchester.)

LONDON FLORENTINE (Exeter Hall, Strand), Nov. 9+ 23, Dec. 14+.

NORTH LONDON, Nov. 23, *Chrysanthemum*.

SOUTH LONDON (ROYAL), Oct. 14+, Nov. 11+, Dec. 9+, 16.

POULTRY SHOWS.

BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.

BARSTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Marmont.)

CORNWALL (PENZANCE), about a week after the Birmingham. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)

DORCHESTER, Nov. 18th. (Sec., G. J. Andrews, Esq., Dorchester.)

† For seedlings only.

PINE-CULTURE — HAMILTONIAN MODE.

(Continued from page 6.)

In the last paper the subject was brought up to the matter of *glass*; heating being merely pointed at. We here resume it; and having stated Mr Hamilton's amount of piping for a house to fruit one hundred plants, we may offer a few observations. It will be remembered that Mr. Hamilton uses a flow and a return pipe all round the pit, with the exception of the end farthest from the boiler, and these exclusively to warm the atmosphere of the house. Each five-feet bed, too, has its flow and return pipe; and if we understand Mr. Hamilton's observations correctly, the flow and return in each bed are totally unconnected with each other, or with the flow and return round the exterior. It may also be observed, that the latter is in two divisions,—the one passing along the south side, and the other along the north, unconnected; a flow and return to each, the only bond of connection being the boiler, or, rather, the iron pan before described, where it would appear all the pipes meet. The two delivery pipes for the atmosphere proceed out of the two sides of this pan, near to and parallel with the end of the house, and the two delivery pipes for the bottom-heat proceed from the front of the pan, and fall at once into a similar parallel, and thence turning right and left into the chambers, the return pipes being, of course, beneath them. It will be seen that by this arrangement there must, perforce, be a great preponderance of heat at the boiler end, which, indeed, is the case in most houses, and so far generally leaves in the mind an idea of incompleteness—something to be desired. We stay not here to offer suggestions as to the possibility of improvements; space will not permit; but merely point, as we proceed, to matters deserving farther consideration, and leave it to the mind of the ingenious reader to examine such portions of the subject.

VENTILATION.—Mr. Hamilton, in his descriptive account, has said nothing on this head; not, however, because it is unimportant. We must here offer our ideas. In all ventilation, as connected with horticultural structures, it is a practice founded on well-known principles, to provide both outlet for the heated air—presumed to be of a depraved character—and inlet of fresh or cool air, of course, pure; these at distinct levels. We need scarcely point to the fact, that such practice is based upon the well-known rarefaction of air by heat, whereby warm particles have a constant tendency to

ascend, and the cooler as strict a tendency to rush in and supply their place. These facts are so well known to our readers that we merely point to them. Of course, under such circumstances, the highest level possible naturally seems the most eligible for the outlet, and the lowest for the inlet. The apex of a span-roof is, indeed, the very point where the greatest accumulation takes place, and here we at once suggest some ventilators. This position in such a house is tolerably fortunate in another respect; beneath it is the walk or passage, and here the operator can work such ventilators with facility, by a rope or otherwise. In all cases, we would have the escapes of liberal dimensions. It has been, and still is a practice with many, to have sliding rooflights, but this is bad practice, involving much breakage of glass and inconvenience; a sufficient ventilation may always be accomplished by the ventilators here alluded to. There are many ways of constructing, fixing, and working these things, and we may merely observe, that any mode which will permit them to be worked with facility, and so fitted as to be capable of graduation and of excluding the rain and wind, will suffice. In a house fifty feet long, and of the character before described, we should have apertures of this kind about every ten feet, presenting an area when wide-open of about half-a-yard in length, by a foot in width. It is seldom that they would be required wide-open; nevertheless, it is well to be provided for contingencies, especially if unprovided with a shade. It must here be understood, that we consider this the minimum amount of escape.

And now for the inlet, or admission of fresh air at as low a level as is consistent with other regulations. Modern practice recognises the propriety of heating fresh air on its entrance to the interior of the house, and there is little doubt that it is really expedient to do so. To this end, the heating apparatus in modern hot-houses is so arranged, that in general one or two pipes are placed as to receive the cold air at its entrance; that is to say, the position of the piping is made to bear a relation to the front ventilators. In some cases, front sashes are used, and these are made to slide or to swing outward on hinges; but, it must be remembered, that there is no absolute necessity for front sashes in pine-culture. Be that as it may, there is sure to arise a necessity for piping at the front of the house, and advantage should be taken of this, to have at least one pipe just above the floor level, and the ventilators for admitting fresh air just opposite that pipe. We think it a very good arrangement where two pipes, a flow and a return, are wanted in front, so to arrange them, and the boiler level, as that the lower or return pipe may rest on the floor line. This pipe we would have partly enclosed in a trench, say half its depth, and this trench made waterproof, and of some eight or ten inches in width, might have a tap at one end, communicating with a gistern or reservoir, so as to fill the trench with water as often as necessary, whilst, at the other end, should be another tap, or plug, entering a drain, so as that the water at any time could be run off speedily. This we consider a most excellent plan, and not a whit the worse from its extreme simplicity; it is what we have formerly termed "a pipe in a ditch." The apertures for the admission of fresh air should, as before observed, be opposite the surface of this trench, and the air would pass through the body of the house or pit duly tempered with heat and moisture. One thing is very desirable, to which we before alluded, viz., the propriety of being able to graduate the front air according to circumstances.

Thus much as to the ventilation; and before quitting the subject, we must beg to recommend a canvas shade to all houses with a southern slope, especially if large panes of sheet-glass be used. This should, by all means, be fixed to work on a roller, after the manner of the

orchid-houses about the Metropolis. Whatever people may say about the pine enjoying plenty of solar-light, which is, doubtless, the case when in a very healthy condition at the root; still, there are a few hours daily, in hot periods, when such shade is of immense benefit, if only in preventing a too rapid diminution of air-moisture. But a judicious shading accomplishes much more, and the preservation of their beautiful green-colour, together with that milky-green tint, for which healthy pines are notorious, is an object connected not only with appearance, but with health itself.

It will be seen that Mr. Hamilton advocates heating by hot-water; and, indeed, when properly fitted, we see nothing there to be desired. As to the old smoke-flue for pine-culture, nobody ever dreams of it in these days. We do not say that pines cannot be grown by such a mode of heating; they assuredly can, and well too, if needs be; but what we must affirm is, that it involves more expense in the end, and more uncertainty; and is, of necessity, nearly as great a consumer, as producer of atmospheric moisture; without a liberal supply of which, it matters not what the mode of culture may be. Whether piping or flues be used, a due provision must be made for air-moisture. It is a very common practice to have flue-covers in the form of a sunken panol, such should be three inches in depth; for piping, metallic trays of a saddle-form, may be placed on the flow-pipe, or the pipes may be obtained with flanges, all of a piece; and these, too, must be made to hold a liberal amount of water. In all three cases, a permanent reservoir should be established, however supplied. Those who have a fall of water, and require much for other purposes, would do well to use a "hydraulic ram," which is, indeed, one of the most valuable adjunct a garden establishment can possess. We have had one in work here for some thirty years, and this constantly supplies the mansion, laundry, stables, gardens, farm-buildings, and, indeed, the whole premises.

Before quitting the heating portion of the subject, we must beg to advert to another point or two. In the first place, our advice is, be sure you have a liberal amount of piping; that is to say, secure heat enough and to spare. We would have an apparatus which would guarantee us 79° in winter, when the out-doors thermometer indicated 12° or 18° of frost. Some persons may think this unnecessary, but they may be assured that under-heating is a false economy—a sad mistake. When the house is short of heating surface, and hard weather occurs, there is a continual temptation to stir the fires, and the owner may rest assured that every stir costs money. We would so arrange matters, as that little stirring was requisite, and that two good fire-dressings in the twenty-four hours should, if possible, suffice; all the rest should be regulated by the ash-pit door. In these cases, care should be taken to secure a capacious grate that will hold abundance of fuel. Those who have to "pay the piper," need not be alarmed at these things; we are not going to advocate a greater consumption of fuel than other folks.

We know of a Rogers's conical-boiler, one of the smaller size, that has been working for some half-dozen years, and we will engage that it has constantly consumed nearly twenty per cent. more fuel than a capacious one would have done. The hopper for fuel is so small, that it requires feeding every two to three hours, and if not waited on, as late as eleven o'clock on a winter's night, it is almost sure to go out. Here, then, is a case in point; the working such an apparatus as this for half-a-dozen years, would go far to cure any one of a predilection for small furnaces.

As to the boiler, we care little about that; too much importance has been laid on these things. The best we have ever had to deal with is a "Burbidge," and from the firm of Burbidge and Healy, in Fleet-street. This

is really so complete, as to leave nothing to be desired. It is on the reverberating principle; and the ash-pit doors, which slide on a round bar of iron, give the most complete command over the apparatus.

One thing, as connected with the heating, we had almost forgotten to name, and that is, the propriety of having sliders or openings in the walls of the chamber that contains the pipes for bottom-heat: these, when the bottom warmth proves too strong, may be opened for awhile, and the surplus heat discharged into the air of the house. By such means, the bottom-heat and air-heat may be made "to play into each others hands." Having now disposed of heating matters, structure, &c., we shall, in a future number, take up cultural details.

R. FERRINGTON.

BEDDING, HERBACEOUS, AND ROCK PLANTS.

The prettiest plant for a flower-garden, that I have seen this season, and one that is very little known out of London, is called *Gaura Lindheimeri*, named after some German of the name of Lindheimer, and is pronounced as if written Lyndlymer, with the accent on the *i*. For those who are looking out for good herbaceous plants, here is one of the gayest, and although not yet proved, I am quite sure it will make as showy a bed as any plant we now possess of a light colour. It is now (2nd October) beautifully in bloom in my own experimental border, and I think we can always rely on it from early in June to the end of September. It will seed as freely as the poppy, and it is perfectly hardy. Here, then, is a treasure, a novelty, and a gay flower to the bargain. I received my plant of it from the Horticultural Society. Fellows of the Society are entitled, by long usage, to any little thing that can be spared from their garden; and many persons join the Society, not for encouraging the growth of cabbages, but altogether for what stray plants they can call for from the garden; and some members do call for things most outrageously, and say all sorts of things if their demands are not complied with by return of post or train; but since 1830, I never heard of any complaints of one member being favoured more than another, in this respect. On the other hand, many of the members think it below their dignity to ask for anything from the Society, and would rather see part of their funds expended in keeping a collector or two, in distant parts, searching for new plants. At present, the Society has no "out" on such a mission, excepting the ninth-part of a man who went out some time since to Oregon. My plant of *Gaura Lindheimeri* is not likely to ripen seeds this year, having been removed at the wrong time. Whether it is in the nurseries or not I have not heard; but there are several large plants of it in the garden of the Society, in the American ground, in patches, and the idea of making it into beds occurred to me the moment I saw it. The plants of it at Chiswick are two or three years old, and between two and three feet high; the upper half being covered with flowers in the terminal-spice fashion, every branch ending in a spike of flowers. The plant grows in a dense mass; the spike begins to flower from the bottom, and before it has done flowering at the top, some of the seeds are ripe on the lower part, just as the *Clarkias* and *Godetias* do. The plant forms a section of the same order (Onagrace), as the *Clarkias*, *Oenotheras*, *Fuchsias*, and the like. The flowers are pure white, starry, and as large again as those of *Jas. minor grandiflorum*, and the calyx is larger than usual, and of a deep pinkish-red colour, throwing a shade of French-white on the flowers as they tremble in the air; altogether very pretty and pleasing. If we go right with this new bedder, we need not have it above eighteen

or twenty inches high, or about the same size as a good bed of *Salvia chamædrioides*, and this is the only plant with which I can compare its style of growth and flowering, only that this *Gaura* will produce three spikes, of three times as many flowers as the *Salvia*.

One may be excused for erring in first experimenting on a plant for a new purpose. But the following is the way I would try our present subject. Sow seeds of it the first week in March, and as soon as the seedlings were up, give them as much air as to *Calceolaria* seedlings. Pot them first into store pots, and afterwards into single pots of the smaller size, and by the end of April they would be fit to plant out in a nursery-bed, or border. Here I would let them remain till about Midsummer, then I would plant them out into the flower-garden, where a bed of annuals were beginning to fade. When the white and red *Clarkias* are sown in the second week in April, they generally begin to look seedy by the last week in July, and this *Gaura Lindheimeri* would be an excellent substitute for a bed of white *Clarkias* in a regular arrangement of colours. Seedlings of the *Gaura* would be coming into bloom by that time, or if they were in full bloom, they would remove from the nursery-bed with no harm. Some persons would prefer keeping them in pots all the while, but that is too extravagant for half the world, because of so much watering, and too slovenly for any good gardener, for unless a gardener can remove nine-tenths of all his annuals, without hurt, from a nursery to a flower-bed, any time before they are in bloom, why, he may as well bundle up and be off to "the diggings." The second year there will be no difficulty in having the bed of *Gaura*, by treating the plant as a biennial. Sow it towards the middle or end of May, in the open ground, in the reserve garden, and if it should throw up for flower in the autumn, let the flower-stalks be cut off as fast as they appear. It will then be in good order to plant out next spring where it is to flower. After that, old plants of it may be divided every autumn or spring, so that the plants do not get too high for a bed; or, perhaps, seedling plants will be found preferable.

Salvia coccinea.—I saw plants of this old and long-forgotten *Salvia* in the same collection, and it is well worth being saved and propagated for bedding-out. The only other one of the genus which will remind gardeners of the aspect of this *Salvia*, is one that was common twenty years ago, and called *Pseudo coccinea*. But this old one does not appear to be so strong, and is a more close and freer bloomer.

I also saw a variety of bedding *Geranium*, related to the *Golden Chain*, but a much stronger, and a larger-leaved kind, with the yellow on the leaves paler. Where the *Golden Chain* succeeds, as it does at Shrubland Park, this will never be a rival to it, but where the soil does not suit the *Golden Chain*, this will be a good, indeed the best, substitute for it. They had no particular name to it. *Punch* was the best scarlet in the flower-beds here, and it stood the heavy rains better than *Tom Thumb*. There was also a fine large bed of the *Salmon Geranium*, and *Lady Middleton* was a great favourite, and preferred before either *Cherry Cheek* or *Judy*. There was a large bed of a neutral tint, made of *Verbena trifida*, a close grower, and greyish flowers, which are very sweet, and the kind is well worth growing, not for bedding, but for cut flowers for nosegays, to be used as flowers of the *Heliotrope*. The best new *Verbena* I have seen this year, for a distinct bed, was at Mr. Jackson's nursery, next door to me, it would make the best pink bed of all I have seen; the flower is a bright reddish-pink, with a large white eye; the plant was in a pot, but the habit appeared to be well suited for a bed, and the name is of foreign accent, *Madame Comonissam*, or some such word, for the tally was not very clearly written.

HERBACEOUS PLANTS.

The very best autumn-flowering plant of this description that I saw in the Society's garden, was *Punkia grandiflora alba*. In my younger days, *Punkias* went by the name of *Hemerocallis*, or Day Lily, and this white one, though not very new, is the very best of the family, and is, indeed, a conspicuous plant, well worth having; and flowering so late in the season, makes it still more desirable. There are two plants not altogether herbaceous, or shrubby, but something between the two as they stood in the borders; one is *Clematis tubulosa*, and the other my own great favourite, *Intigofera decora*. Both have received medals as green-house plants, but they are sufficiently hardy about London to stand out in the borders, and from what I know of them, both prefer a peat border. The *Clematis* stood as a thick bush, twenty inches or two feet high, and well covered with large light-blue flowers. I saw it in two or three other places this season, where it was not nearly so good, but the nature of the soil made all the difference. *Gentiana pneumonanthe* was in fine bloom in the American garden, and there were several other species of the Gentian, all nice flowers for a mixed border; and there are several little shrubs, or half shrubs, that are equally suitable for such a place, and foremost among them is the old-fashioned *Comptonia asplenifolia*, named after Bishop Compton, the greatest patron of gardening and botany in his day. It is a North American plant, doing better in peat than any other way, with leaves as pretty as those of a fern; and *Clethra alnifolia*, another little American plant, requiring a damp peat-border, and seldom seen out of nurseries. I saw them both in the mixed borders at Chiswick, and I never saw them so much in character before. In the same borders were large patches of the scarce *Azalea procumbens*, which one hardly ever sees in these days out of botanic gardens; this is a native of the Grampian range, in Scotland, and it is said that at one time its place of growth was only known to the Messrs. Brown, of the Kinoul Nursery, at Perth, who made a better market of it than of the *Double Scotch Rose*, which was first obtained by them in that nursery, and I never saw it more flourishing than on this occasion, and I recommend it and *Epigaea repens*, another scarce plant, as pet plants for the American borders. A plant of the *Lilium giganteum*, of India, one of the most stately of all the true lilies, has been planted out here in the new American garden, and it looks as if it would do out-of-doors with us; and if so, it will be a match some day for the Pampas grass (*Aynerium argenteum*), which is not far from it in the same garden, and which I hope the Messrs. Dickson, of Chester, will be able to seed, and when Mr. Appleby calls there again, he would bring us up a large batch of the seedlings; indeed, it would be worth while to send out to Mr. Tweedie for a peck or two of the seeds of this royal grass. Mr. Tweedie was the collector who first sent it to the Glasnevin Botanic Garden, in Dublin; and as Mr. Appleby tells us (vol. viii, p. 414), that "unfortunately the Messrs. Dickson have not been able as yet to increase it," writing to Mr. Tweedie seems now the only chance we have of getting a stock of it for supplying the universal demand that is sure to be made for it wherever THE COTTAGE GARDENER is read. Does our friend Mr. B., of Philadelphia, know a correspondent in the south, who could send him a supply of the seeds? Let him and Mr. Low, of Clapton, who has dealt largely with Mr. Tweedie, run a race for this grass.

ROCK PLANT.

* But grass or no grass, I must not run away from my little pet plants, till I make known the best rock plant, in England or America either; it is called *Polygonum vacuifolium*. I saw it both at the Society's Garden, and at Kew, and there can be no mistake about it,

although some of us are disappointed at not seeing the flowers come out so gay and brilliant as they are given by Dr. Royle, in his "Illustrations of the Plants of India," where the colour of the flower and the spikes is a deep rose, but with us they put you more in mind of a red brick than of a rose; nevertheless, all the cottage gardeners in the kingdom must get hold of it. It grows as close as a carpet, and runs away "like anything," as Sam Slick would say. It only grows a few inches high, but it flowers all over, like a corn-field, in close spikes, three or four inches long, and that top all through the autumn, until the frost puts a stop to it. According to Dr. Royle, it grows up as high above the level of the sea as 13,000 feet, on the peaks of the Himalayas, so that no frost can hurt it here. It would soon carpet a bed for Rhododendrons, like *Musk mimulus*, or it would cover over rock-work, or blocks, or make an edging for any block bank, or cover bare places about a Swiss-cottage, like the common *Lutzel*. D. BEATON.

JOTTINGS ABOUT MATTERS OF TASTE.

Unity of Expression.—"And what about that cranky subject?" good-humouredly write and say many of our friends. "Just let us know the temperature and the soil, and the waterings, certain plants require, and leave us to give expression according to our fancy. Your greatest doctors disagree as to the veriest trifles in these matters; why should not I have a fancy of my own? If it pleases me, who has a right to interfere? And by what means can you demonstrate that your ideas, your tastes, your arrangements, are superior to mine?" I own there is great force in statements such as these. We all will form opinions of our own, and it requires time, observation, and thought, to alter us a shade in their validity. A man could hardly get along if he did not consider his own plans best in the peculiar circumstances. He must be orthodox. The mischief is that, going a step farther, he is apt to imagine that his *doxy* is the only orthodoxy, while all other *doxies* are heterodoxy. Would that these ideas were confined to gardening. They meet us in the most momentous affairs of life. In our little world of gardening they foster alike rude, independent action, and a servile, copying spirit. "Oh! such a design will be quite out of character with the rest of your grounds; it will neither contrast nor harmonise with anything." "Indeed! why? I don't see that a fine wheat stack even should be any disagreeable object on my lawn." Another will have beds of his own quite original in their form, and they are twisted and turned into all conceivable quirks and fancies, involving vast labour in making and keeping, and yet never can be made to present an imposing effect. "One arrangement is very striking at a certain place—I will have the same here." It matters not that one position may be on a hill, and the other in a valley—that shutting out may be required in one place, and opening up in another! Water in every shape is a delightful accessory in gardens and pleasure grounds: its very sight cheers—the noise of its gurgle, ripple, or dropping, tranquillises the mind. A gentleman has come from Versailles, or witnessed the unequalled *jet d'eau* at Chatsworth, and forthwith he must have a spirited miniature fountain in his garden, though placed in the highest ground in the neighbourhood, leading every visitor to ask in astonishment where the water comes from. No doubt, even in this respect, much may be done with water-rams and steam power; but if the natural position of the valley is wanting, the magical influence of a fountain will ever be lessened, if not destroyed.

Hence it is, notwithstanding all that has been said and written, that the expressions, "good taste, and bad

taste—refined taste, and vulgar taste," are a mere bewildering enigma, being interpreted by as many minds to mean as many different things. Hence, too, our most learned and able writers on taste, gardenesque effect, &c., speak so astutely about "*imitating nature—following nature—taking nature for our guide*," this same nature being a very useful, somewhat undefinable "looming"—something for adorning a sentence, or clenching an argument. And yet how indefinite is the idea communicated. We know that in all culture of plants we must take our first teachings from nature, ponder over and endeavour to supply the *circumstances* in which plants, unaided by man, flourish the most; but there, in an artistic point of view, the matter mostly ends. Surely it is not intended by the "imitators of nature," that our park scenery is to be the *beau idéal* of a thick forest, that has received its planting from the winds and birds of heaven; that our pleasure-grounds are to resemble untrodden prairie, or the thickets by the side of a tropical stream; or that our flower-beds and plant-houses should have their exact counterpart in the circumstances, as well as flowers that deck the mountain's brow, and peep through the tangled glade. All these have their charms, and will ever command admiration; but artistic loveliness—the seen and felt presence of the tending, training hand of man, and yet not offensively obtruded—constitutes the *delight* of the garden. Make the *position* and the *circumstances* connected with every demesne, however humble, the first principle, the ground work of all ornamental gardening operations; and instead of unmeaning combinations, or servile imitations, we shall have little Edens, as interesting as they are diversified. Follow out in such arrangements the *imitation-of-nature* principle, and our Paradises would become monstrous wildernesses, eliciting, after all, but little of the kindred emotions we experience in beholding more natural scenery, that has cost man but little money or labour.

True, the introduction of the wild and picturesque in garden-scenery is *sometimes* attended with the most delightful results. But several things are necessary to secure that result. First: The *natural circumstances*, as respects character and position, must be suitable. Secondly: The grounds must be so large, that the clearly artistic gardenesque, and the more concealed artistic picturesque, should not be jumbled together. A knotty, wrinkled, hollow pollard, filled with flowers, looks beautiful on a lawn, at some distance from an elegant mansion. An artistic vase looks best near such a house. The beauty of the one and the other consists in their being so separated, that the mind and the eye alike have space for repose, before contemplating their separate beauties. Place them in juxtaposition, and you destroy the peculiar interest of both. Contrasts of opposite styles do not interfere with; they even help, and are necessary to a higher style of beauty, to a more perfect wholeness; but then these contrasts must be gradual, not commingled or rudely clashed together; for we can only contemplate one set of ideas successfully at one and the same moment, for the sake of a bewildering variety and contrast we lose all the benefits and beauties of a "*unity of expression*."

I feel myself a very tyro in these matters, though convinced as to the general correctness of the inferences adduced. In proportion as civilization and refinement advance, it will be found that these *trifling things* will gain in importance. A good while ago, similar ideas were broached, when, in answer to inquiries, I endeavoured to define the meaning of the terms *Greenhouse* and *Conservatory*, mentioning that the first was a house for preserving plants in pots and boxes, while the latter was a habitation for exotic-plants, planted out in the soil. I endeavoured to shew that a higher style of beauty would be insured, by as much as possible

attending to these characteristics, and thus instead of confounding, promote "*unity of expression*." I do not recollect if I instanced any facts in confirmation. Let me just mention what convinced me more fully then, and what still further confirms me now. At one of the Regent's Park Exhibitions, two years ago, the show of American plants was in full magnificence. One peep below the awning was a realization of the dreams of Fairy-land. Even the beauty of the ladies, dazzling as it was, seemed for once to be shaded. Much, no doubt, depended upon the beautiful arrangement, and the ground-plan so diversified, with bank and declivity, miniature hill and dale, but not a little also depended upon the fact, that *not a pot or box were to be seen*. As you traversed the regular exhibition-tents, unity of idea was again so far prevalent, that every thing had its pot, or box, or block, or basket; but when, after this you entered the beautiful conservatory, and felt delighted in examining the fine healthy specimens of growth, there was still a feeling of the *heterogeneous* associated with the whole, and that mostly owing to the fact, that many of the best plants *were planted out*, while others stood in large pots, &c., while collections of small pots were so grouped in masses that the individual pots were easily seen. It does not become me to criticize the mode adopted there, or at the rival garden at Chiswick. Public bodies must frequently attend to much besides little matters in taste. Still, I think there are few but will own that if in the conservatory at Chiswick, while the side-platform, as now, is devoted to plants in pots, the plants in the centre bed were not *partially*, but *wholly* planted out, or so plunged with their pots as to seem to be so, that a higher style of beauty would be manifested, *merely because a unity of expression was thus made apparent*. The same facts struck me forcibly as respects the large conservatory at Kew, when I traversed it during the summer. I mention these, because the instances are well known, and because, from the great good that has been done by these Societies, and the influence they properly and deservedly exercise, whatever is done is noted down as an example by gardeners and their employers.

Now I have not seen many places where these simple ideas are *rigidly* carried out, but if I wanted any thing to convince me of their soundness, it would be my recent glance at the grounds, and the well-known large conservatory at Chatsworth. The very position of the building is a master-stroke of policy, combining all the advantages of unity of expression, with the pleasure derived from contrast, between the gardenesque, the picturesquely romantic, and the more purely artistic lineaments of the noble building; situated in an amphitheatre of wood (or seemingly so), peculiarly its own. Just fancy such a huge airy building, so attractive to the eye outside, by its stripes of blue and white painting, Crystal Palace fashion, set down near the Palace of the Park, or in the middle, or even at the side of the highly-kept grounds, and imagine the bewilderment with which a stranger must contemplate the scene, purely from the want of repose between the different objects, the inability to grasp the whole at once. You come not, therefore, on the conservatory immediately on leaving the finer dressed grounds. You enter upon walks, which gradually become more picturesque, through the wooded hill, that overhangs alike the dressed grounds and the classic Derwent; these walks, as you traverse them, become more wildly romantic. Embosomed in one nook you see masses of fern—in others, and creeping over huge stones, some of the finer and hardy American plants; now you pass a huge boulder of rock—again, another that rocks at the slightest touch; and ever and anon you pass huge heights of these masses of rocks, piled securely and firmly, yet wildly upon each other, leading your thoughts back to the doings of the giant Titans of old, when they

rolled mountain upon mountain; and just when in the height of your enjoyment, and wondering where all this will lead to, the large conservatory, with its open area for flower-garden plants, bursts upon your view. Now, in the whole of this wild scenery you never see anything directly opposed to nature; but you never lose sight of the fact, that, the natural circumstances secured, the mind and energy of a human designer had accomplished the rest. The plants in the conservatory looked vigorous and healthy; a platform round the side was appropriated to smaller plants in pots. The whole of the plants in the vast centre were planted out, or seemed to be so. No huge tub, or dirty red pot, interfered with the fine base of a stem of one plant, or the graceful, drooping foliage of another. Here, as well as in the rest of the grounds, the beauty was enhanced from the felt "unity of expression" that prevailed. But I must stop.

R. FISH.

SEEDLING DAHLIAS FOR 1853.

A FEW rambling notes by a friend, who signs himself *Observer*, has been sent to me, and I know the writer to be not only a good and most successful grower, but also one of the best judges of the day of the Dahlia.

He says, "I have seen all the following, and can speak confidently of their merits. I begin with Rawling's *Lilac King*; this is one of the gems of the season; fine lilac; the centre is the summit of perfection, very symmetrical. It is with me No. 1.

"*Sir John Franklin* (Turner's).—This is very much in form and substance like the preceding, with all the properties of a first-rate Dahlia; colour, dark orange-buff.

"*Queen Victoria* (Wheeler's).—Yellow, edged with purple; form, first-rate, and very beautiful; the centre well filled up.

"*Brilliant* (Rawling's).—Bright scarlet of the finest form; centre well up; easy to grow; decidedly the finest scarlet Dahlia ever produced; first-rate in every point.

"*Lord Byron* (Pope's).—Is a flower I noticed at several of the leading shows; the form is first-rate; colour, a clear bright salmon.

"*Miss Caroline* (Brettell's).—White, tipped with purple; a flower resembling the *Marchioness of Cornwallis* Dahlia, but without its faults; every flower appears to close well.

"These six flowers are the gems of the season, and have received the bulk of the certificates. No amateur can mistake, if he wishes to grow the best six varieties for 1853.

"I now go on to notice about six more, which will comprise all I intend speculating in this year among the show varieties.

"*Plantagenet* (Turner's).—Shaded purple, very constant, and a good colour.

"*Bob* (Turner's).—Scarlet, rather flat in the face, not equal to Rawling's *Brilliant*; rather different in colour, but useful, as good scarlets are rather scarce.

"*Lady Dalrymple* (Turvill's).—Light, edged with pink; a flower well up in the centre; of good form; rather small, but useful.

"*Annie Neville* (Keynes's).—Light, edged with purple; well up in the centre, but rather deficient in outline, but useful from its colour.

"*British Queen* (Drummond's).—Light, deeply edged with purple. I have only seen a flower or two, but what I have seen were good; rather thin, and I should say difficult to close.

"*Mrs. Stein* (Stein's).—Shaded purple, rather small, but well formed; one I should grow for its novel colour and shading. It is a very likely show-flower.

"These are all the flowers I have noticed out of a great quantity exhibited at the shows, and I have attended many of them. The fancy varieties appear to have made very slow progress this season; in fact, there has been

very few shown. The best I have seen this year, is *Mrs. James Rawlings*, a sort of puce tipped with white. The flower took two prizes at the Surrey Gardens. I liked it there very much.

"*Wonderful* (Keynes's) is a striped flower, one of the best striped varieties, and has taken several prizes. There should be a class for striped flowers, to encourage their production.

"*Unanimity* (Edwards's).—Another distinctly-striped flower. If a new class is made for stripes these flowers will be in demand.

"These comprise my observations on the new flowers. If these notes are of any use to your readers, I may be induced to give my opinion on the last year's flowers, as I have grown most of them.—OBSERVER."

I have very few to add to "*Observer's*" list; he is truly a correct observer, and our amateur friends, growers of dahlias, cannot do better than follow his advice. I pledge myself to the correctness of his descriptions.

Mr. Stein, of Highgate, has a promising seedling, a light scarlet, named *Robinson*, with great depth of petal, of good substance, and excellent form; the same raiser has also one named *Mr. Lockner*, a pinkish-lilac, novel in colour, good in substance, and of first-rate form.

Also, one named *Mr. Dickson*, a bluish-white, smooth edges, well up in the centre, and of excellent form. The suggestion "*Observer*" makes, that he is willing to give his experience and opinion of last year's Dahlias would, we are sure, be useful and acceptable to the readers of THE COTTAGE GARDENER.

T. APPLEBY.

WORK FOR WET DAYS.

UNLIKE the last and several previous seasons, the present one seems likely to visit us with all the armoirs of rain which our weather prophets told us was due from the dry winter and spring, which, if not followed by abundance of rains in June and subsequently, would have left our ponds, streams, and wells, lower than was ever known; as it was, they were very low, even in mid-winter, and still more so in May; however, there seems no reason to think that water will have to be carted at Christmas this season, as it was last, to places where it was only necessary to do so in the summer before. The abundant rains of the last month (to say nothing of the present one and what may follow) will certainly replenish all our fountains, and for some time to come the ground is not likely to lack moisture; but in the midst of all this wet weather, the question arises, What are we to do; since out-door work is no longer a duty that can be performed? It then becomes us to see what can be done to advantage under cover in these successional wet days, we have been of late so often visited with.

Where there is ample shed-room, the dung for mushroom-beds may be prepared, and the beds made, spawned, and other work connected therewith done; not forgetting to look to those beds that are in bearing, or may be expected to come into use soon. These latter, if they have been enduring the drying influence of fire-heat in any shape, must be supplied with water at those parts most exposed. It often happens that a mushroom-bed is formed in some back shed where the stoke-holes are placed. Now these fires, though heating the structures on the other side, very often diffuse an amount of heat backwards sufficient to maintain the temperature of the shed several degrees above similar places where there is no fire. Now this is very useful, as, notwithstanding the healthy, fine mushrooms that are often gathered in the open air until very late in the season, sometimes to Christmas, still some little warmth is necessary to insure a crop at that time, and still more so afterwards. Now

a mushroom-bed made in such a situation, is often more productive than those in "the house" set apart expressly for them; so that the amateur, or he of small means, who has no better place than a corner of half-a-dozen square yards, may, nevertheless, try his hand with a fair chance to succeed in the culture of this capricious production. This vacant space we suppose to be bounded on one or two sides by the wall of the building, on the other sides some temporary erection must also be put up, to keep the dung, &c., from breaking down when looking at the bed, gathering the crop, &c. Where dung is plentiful, and a bed of this sort is to make, I do not like the plan of throwing aside so very much of the litter as is done in preparing dung for beds in a regular mushroom-house, where they are obliged to be made so thin; on the contrary, leave a considerable part with the dung, and in making the bed, let it be double the thickness of the others, about two feet is not too thick, but be sure the dung has been well prepared by frequent turnings, and until all the rank heat is driven off. Now this work may be all very well done on wet days; in fact, if the materials be all inside, it is, perhaps, better done at that time than in dry weather. The spawning of beds that have been made a few days, and have been left to prove their heating powers, may also be performed, and earthing them over may also be done at once; this, in addition to preparing dung, &c., for future beds, may form a very profitable employment for a wet day.

It has been customary, from time out of mind, to *rope Onions* and hang them up; and though some of our younger brethren may dispute the doctrine of their keeping better in that position than when lying on a shelf or dry floor, yet we are not quite sure our grandfathers were at fault here. A string tied tight about the neck of the onion is likely to prevent the escape of its juices through that channel, while the position the rope is usually placed in is certainly more conducive to its preservation than when it is, in an indirect manner, in contact with mother earth. We like an ordinary hay or straw baud best for a centre; and care should be taken not to bruise the onions in the handling. And we have no doubt but those who compare notes will be led to say in March, that tied-up onions have kept better than others. This job may advantageously be performed on wet days.

Root crops may also be looked to. *Carrots* keep quite as well in an ordinary cellar when not packed into that close mass so common to some; in fact, I object to pack them at all until December, or when the moisture, which more or less accompanies a heap of most productions, passes off; they may, however, be looked to now, and any symptoms of decay, or decaying matter of other kinds, removed, so as to give no chance to putrefaction spreading through neglect. *Beet* and *Parsnips* we suppose to be in the ground still; but that most uncertain of all productions, the *Potato*, must be looked to, and that frequently, as report would seem to imply that the whole crop of 1852 is, in many places, fast approaching a state of dissolution; and, if we regard the opinion of the worst of those evil prophets who pretend to foretell future events, both the stock of the ensuing winter, and the seed of another year, will be a dead letter. Without going the length of fearing such a result, I must own that I have never seen the disease so bad as it is this season in this district; still I hope that a remnant will be left for us to try again, to see if this scourge cannot in some way be counteracted. All that can now be done with these potatoes which show symptoms of decaying, will be to pick out all the bad ones as they show themselves, and, after drying the others as well as can be done, to dust them with quick lime. This powerful agent is an antidote to most of the fungus tribe, to which this disease is said to belong.

Another job for wet days is the making and sorting of *Label Sticks* for various purposes; some very small ones may be prepared, and tied up in bundles, to name varieties of bedding-out plants, and others that may be potted off when spring comes round; larger ones, but of the same material, may be made for labelling seed pans and other uses, when something more than the mere name may be added. Then, again, large strong ones of the best enduring wood may be made for marking out the position of bulbs, and other unseen plants, that may be scattered over mixed borders; these, when not marked in some way, are apt to have the spade driven right into the centre of them when the border is dug; but a mere mark is not sufficient, better smooth one end of the stake, rub on a little white paint, and at once write the name with a pencil. If this be well done, it generally lasts as long as the wood endures. These should be rather stubby than tall, as they are not wanted to show themselves conspicuously, but another kind may be made longer, to mark the varieties of kitchen vegetables sown and planted. These ought to be of such a height as to stand to be seen when the plants have grown considerably; for this latter purpose, rounded stakes, flattened and smoothed at one end, are as good as any.

All these, and many more duties, may be performed on wet days, to say nothing of that "riddling" of the sheds and other places, which, in spite of regular good keeping, require now and then "a thorough cleaning out."

J. ROBINSON.

VINES AT BISHOP STORTFORD.

Fine flowers, fine fruits, and fine vegetables, form subjects for poets and painters, are eagerly sought after by the rich, and looked at with longing eyes by the poor.

A recent visit to Hampton Court, and to Bishop Stortford, has proved to me that there is no royal road to gardening. At Hampton Court, all the appliances of the public purse do not enable our Queen to have at her desert such grapes as are to be seen in a private garden at Bishop Stortford. The Hampton Court vine has been celebrated for nearly 200 years, as a *rara arbor*, and so it was, till others and better were to be found. I have no desire to detract from the splendid growth and excellent training of the Hampton Court vine, but when I find a private gentleman, of moderate means, and with a moderate man for a gardener, can beat the royal vine, I think I am justified in saying, there is no royal road to horticulture or to knowledge.

I will endeavour to describe to such readers of *THE COTTAGE GARDENER* as cannot visit the royal and the plebeian vines, what I saw, for their benefit. The vineries at Stortford consist of two well-glazed, lean-to houses, each sixty feet long, eighteen wide, and sixteen high at the back.

In one house there are fourteen vines of the Black Hambro' kind, entering the house (by a very simple contrivance described below), not up the rafters, but half-way between the rafters, and so up the roof, consequently enjoying all the light which can be had under a glazed roof. Each vine has on it about fifty bunches of grapes, of an average weight of 1½ lb., and in size about a small pigeon's egg. The colour is perfect, and but for a little rust this year, finer grapes never was produced.

In the other house there are the same number of lights, and about the same number of vines of the Muscat kind. These vines enter the house precisely as the others do; there are, as nearly as possible, fifty bunches of grapes on each vine, and each bunch will, when ripe, perhaps average from 2½ lbs. to 3 lbs. The grapes are very large, very even in size, and very clean in growth. The vines in both houses are in perfect health, always feeding upon a rich dish, which does justice to them, and which they do justice to. The leaves are neither gross nor small, but clean, transparent, and full of health, each leaf seems the counterpart of its neighbour, and which set off the fruit quite as much as the fruit sets off them.

The stem of these vines, only ten years growth, is bright

and clean, and as thick as a burly yeoman's arm. There has been no rampant growth, and there is none now. They are pruned upon the short and close spur system, and growing, as if by order, an exact and moderate length. The houses in which the vines grow and flourish face the south, at an angle of forty-five degrees; they stand upon a steeply-sloping bank, and are planted in a well-drained and well-made bed, in such a way that they can be looked after, and trained with nicety and ease.

There is nothing royal in the houses, and nothing royal about the man who waits upon them. The houses are clean and sweet, and the man is civil, without servility. There is an air of order and industry about the place, that makes any thoughtful person believe that where there is a will there is a way.

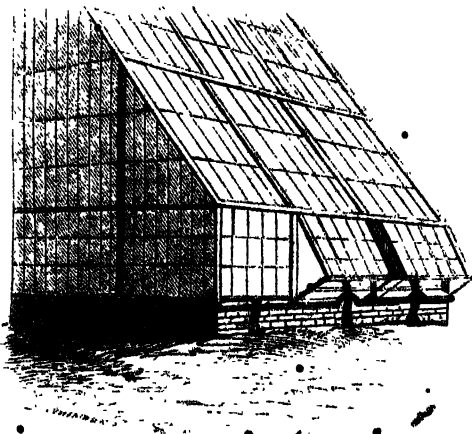
At Hampton Court the vine is large and fully grown, and managed from its origin upon the long-rod system; age, however, begins to tell upon it. The grapes this year are small, and many bunches will never colour, and never ripen. The house is good in size, and clean, but grand as it is, and as it was, it will not compete with the plebeian's vine in Hertfordshire.

There is something refreshing to my mind in the retrospect; it makes one think how much a man may do who puts his shoulder to the wheel. To be up and doing is the way; never to be dashed, and never to be daunted; a no-surrender man is the man for me, and the British, when once fairly on the scent, succeed wonderfully, excel everybody, because they look far and near for information on any subject they take up. The French invent, and we perfect. The foreigner is full of theory; we are full of practice.

I am well aware there are many aristocratic vines which will compete with those which I have described, but the reader must recollect these aristocratic vines cost an aristocratic outlay; whereas these plebeian vines are tended by a solitary man, who must keep watch and ward over them from one end of the year to the other.

I ought to mention that the Stortford vines are not forced, but merely cared for. Each house is warmed by a fire, and these fires are only used in very chilly or very damp days.

If the foregoing is thought worthy of a place in your journal, I may, perhaps, take the liberty of entering upon a further correspondence at some future time. —THOS. MOXON.



The above mode is adopted for admitting the stems of the vines into the vinery without holes in the brick-work. A broad plate of thick wood projects about a foot from the wall, a semicircular piece is cut out of this for the vine-stem to sink into, and the front lights can then shut down close upon the plate. In the above drawing, two windows are shown propped open, and one is closed. At Bishop Stortford vinery, a piece of wooden plate is fastened to each window, out of that the semicircular piece is cut, so that the plate shuts down upon the vine-stem, but causes all the front lights to project in a slanting direction, even when closed.

* The sooner the better.—ED. C. G.

THE CULTIVATION AND HARVESTING OF TOBACCO.

IN THE UNITED STATES.—Sow as soon as frost is fairly out of the ground, or even in February, if you can get a warm spell of weather sufficiently dry to enable you properly to prepare the seed bed. Select a warm, sheltered spot of virgin soil, free from grass and weeds, dig it up lightly, and put the surface in very fine order. For a bed of twelve or fourteen yards square, mix a large wine glass full of seed with about a peck of fine wood-ashes, so as to divide the seed equally through it, that it may be more evenly sown. Sow broadcast on the surface, rake with a fine-toothed rake very lightly, and tread or roll the ground very firmly.

IN ENGLAND.—Sow in a bed, with gentle heat, about the 10th April, or, if only for a few plants, in a small box, or large garden pot, under a frame, with little heat, until the plants appear; but take care that the plants do not get long stalks, as that is fatal to a good plant. They should, when young, be as flat to the ground as possible; if they come up too thick, wait till some have got five or six leaves, when carefully prick them out, so as to give more room for the others to come on; when the largest leaves are about three inches long, plant out where they are to remain, not nearer than three feet apart—in light, warm, well-drained soil, not over rich; if artificially made, let well-rotted leaf-mould form a large portion. Keep the ground well stirred and pricked around it during the period of its growth. The chief ingredients it seeks are potash and ammonia; the latter it obtains in a large amount from the atmosphere, through its immense leaves. As soon as any of its blossoms show colour, break off the head of the plant, including also the small top leaves; this will soon increase the size of the leaves, but, at the same time, the plant will again make an effort to blossom, by throwing out side-shoots. As soon as these become about two inches long, or as thick as your little finger, break them all off. If the season is not too wet, the plant will now begin to open; the ground leaves first, and so upwards. But sometimes it will become necessary to let the plant stand till you have to break off a second set of side-shoots. In America, and in a large crop, you must judge by experience when the plant has the best average of matured leaves upon it, and then cut it down and hang it up in a large, open, and airy barn to cure; but in England, on a small scale, you had better strip each leaf as it becomes ripe, and only cut down what remains when you are afraid of a sharp frost. The small ground leaves generally turn yellow, and in wet weather get partially damaged; they ought then to be pulled, with a large needle and piece of twine, string them and hang them up to dry, leaving them so that air can freely pass between them, and in as airy a place as possible, but under cover from night air, dew, or rain. These leaves will cure light and thin, and make very mild smoking tobacco; the next set of leaves may, or may not, turn yellow, but will look blotchy and rather transparent looking; they may then be pulled and treated in the same way, and so on as they ripen; but seldom, if ever, the whole of the leaves will ripen in this country; so when you anticipate a sharp frost, cut the plant down, and hang it up also to dry. Now, cured tobacco always rapidly absorbs moisture from the atmosphere, and can only be handled when it has given a little, but it must now remain until every vein in the leaf has become thoroughly dry, and not a particle of sap remains in it; in this damp climate that may be a very long time. After it has once been thoroughly dry and crisp, watch the next change in the atmosphere, and as soon as it is soft enough to be safely handled, and the middle vein is not crisp enough to snap when bent, take it down and tie it in small bundles, or hands; put these, if on a small scale, in a box, packed evenly with the butts outside, press them moderately, when they will undergo a slight heat; but this is the most delicate and nice part of managing a crop of tobacco; on it depends, most materially, its good flavour, and six or eight hours neglect may injure the whole crop, indeed totally spoil it; on a small scale, however, it cannot suffer so much from the same cause; when fermentation once commences, it sets in with great rapidity; all that is requisite, is that a very slight warmth should be generated, then, open it all, shake the hands in the air, so as to let off the heat, and repack it again lightly, or, if it is in the right

condition; you may pack it down as tight as possible into any barrel or box, and it will not heat any more; and the tighter it is packed the better it will preserve its flavour. The sweating gets rid of the bitter gum that coats it, and, when properly conditioned, it should have a fine fresh, fragrant smell, somewhat similar to new hay. The principle of curing tobacco is precisely similar to the correct principle of making good hay, or clover hay, only a more delicate operation. Clover, or grass, when partially cured, should always be put into heaps until fermentation takes place, give it then a good shaking out and airing, and it will never injure by heating in the stack; so with tobacco, only it must be managed with a little more nicety, as it changes its condition so rapidly with each atmospheric change. Nitrate of potash is the chief ingredient in its ashes. The stalk or stem of the plant is of no use except for manure, for which it is valuable for any of the cereal crops.

It is erroneously supposed by many to be a great exhauster of the soil, and to require very rich ground. The idea is a monstrous fallacy, based upon practical results, without tracing them to their proper cause. Rich ground will make a very heavy crop of inferior tobacco, but the finest tobacco that can be grown is upon a poor sandy virgin soil. The first and second season after clearing off the timber, when the plant can obtain a sufficient quantity of potash from the little vegetable leaf-mould that is on the surface, combining which with the large quantity of ammonia its extensive system of leaves enables it to absorb from the atmosphere, it forms the nitrate of potash which, with some silicates, forms the principal ingredient of its ashes. A wet season is the most fatal to tobacco, especially if water lies about the roots; for which reason a little side or very undulating ground will make the brightest crops.

LEYTON.

[The correspondent who has obliged us with this, says it is furnished by a Maryland tobacco planter, now resident, and for the last two or three years, in England, and, therefore, may be relied on.—Ed. C. G.]

THE BEST FUCHSIAS.

Allow me to say a few words on the six best Fuchsias that are out. For the three dark with purple corolla;—First, take *Nil Desperandum*, *Clayton Hero*, and *Alpha*. These are the best three darks, so far as quality is the object. If size, then take *Orion*, *Don Giovanni*, and *Smith's Kosuth*. For the light, take Banks's *Conspicua*, *Ariel* (Banks), and *Princess* (Banks). These I have found to be the most useful light ones that are grown. Their quality I have tested, therefore, if your correspondent, "Lacy," has not them in his collection, I should advise him to secure them; they are reasonable in price. He may obtain all the varieties mentioned above, at Mr. Smith's, Tollington Nursery, Islington. If "Lacy" wants something near perfection than the Fuchsias I have noticed, he must wait till the spring of 1853. Then he may procure *Ben's Glory*—than which in dark Fuchsias there is nothing equal to it. The beautiful deep crimson of the tube and sepals, the corolla being a glossy violet purple, forms a most gratifying contrast. It has had the honour of six first class certificates at the principal shows this season. Likewise a light Fuchsia, *Lady Franklin*, is considered the best light-coloured. The tube and sepals being so pure white, and the corolla pinky purple; it is quite entering into a new class of Fuchsias. If "Lacy" procures these in the spring, he need not fear competition. There are a few others that ought not to be omitted, if a first-rate collection is wanted. I will name them at a future time.—H. WEATHERILL.

COST OF KEEPING COCHIN-CHINA FOWLS.

UNDER the impression that I had sufficiently trespassed on the space of your paper, and the patience of your readers, I had determined to trouble you no more; but Anster Bonn's last letter calls for some remark. I do full justice to her zeal, her intelligence, and knowledge of the good qualities of Cochin-China poultry—I admire her candour; but whilst I read with pleasure her remarks, and readily

believe she is fully impressed with the reality of all she states, I must, with all courtesy, be permitted to add, that I am not the least convinced that Cochin-Chinas have any right to the great superiority she wishes to claim for them; nor do I think that Anster Bonn, keeping only one sort of poultry, can enter into this comparative discussion with a mind as unprejudiced as one who, like myself, keeps several sorts of what are supposed to be the best poultry, and who (only wishing to arrive at what is really the best breed) has no prejudice or partiality to gratify.

When Anster Bonn did keep other poultry, by her own account they were "indifferent Dorking, Spanish, a mixed lot, &c.;" but in my case I claim to have some of the best Cochin-Chinas in England, bred from Mr. Sturgeson's and Mr. Andrews's best birds—not (as Anster Bonn hints) "with length of leg, and upright gait," likely to have any cross of Malay; but short-legged, good in colour and shape; and as you, Mr. Editor, have seen my birds, you will give me credit for not degrading Cochins from envy. I agree perfectly in many of the good qualities advanced by Anster Bonn in favour of her feathered friends—I admire their laying powers, their docility and their early maturity; but even on this last point something may be said. I have heard (and am inclined to believe) that an opinion is gaining ground with some of the oldest, most experienced Cochin-China fanciers, that if this poultry does come into use earlier than other fowls, so they go out of use proportionably earlier. If this proves to be so, one of the great merits claimed for them is much weakened. Time must prove this. I am inclined to attach great weight to my opinion, coming to me from the quarter it did.

Anster Bonn, even, cannot defend the size of their I heard remarked at the time. The other morning when some Cochin-China eggs appeared for sale, I asked, "Why, I could eat a box of them." I can sympathise with others. I have detected since having been let in for a "dinner egg," I was forced by noising that I had only eaten for a "dinner egg" what was called a "dinner egg" (an abomination of six weeks old).

Two points must remain in dispute between Anster Bonn and myself:—The quality of Cochins as table fowls; and the quantity of food they consume. The first must be always a matter of taste. I have now tried several, and still think they are not equal to any Dorking (Mr. Bailey's, or anybody's). Of the dinner to which Anster Bonn alludes I had heard some rumour; and I do not doubt Anster Bonn's kindness and candour will induce her to inform us, whether the general opinion in the dining-room was pronounced as decidedly in favour of the Cochin-China as she tells us it was "out of the room." I have heard a whisper it was not so.

Anster Bonn's statement as to the expense of food of her fowls is to me perfectly astounding. "One penny a week per head!" It strikes me, either that I (from being, I suppose, a friend to the farmer) have been paying too much for my corn, or that there is some error in the domestic economy of my poultry-yard. I never kept any correct account of the weekly expense per head, but in a rough way I have supposed it to be from 3d. to 3½d. per head weekly (unless with the run of a farm yard, when it would be much less), for common fowls, and more for Cochin-Chinas.

I have heard several remarks of—"A penny a-week, indeed! Ridiculous! Much more like a penny a-day, &c." I offered an old woman, who walks some of my fowls, a penny! twopence! threepence! a-week. She refused them all.

A poultry dealer of my acquaintance puts it at 3½d. a-week. "But then, Sir (he added), I can get my stuff cheaper than you." I am determined, now, to put this to the test. I have confined two lots of fowls (each consists of one Cochin-China cock, and two hens) in two separate yards. A quantity of food had been weighed previously, in separate boxes, for them. From these they will be fed, and as what is left at the end of the week will be weighed, I can ascertain to half-an-ounce what the consumption of food has been, and your readers shall be acquainted with the consumption, the cost, the number of eggs laid in the time (and their joint weight); and they may then form their

own opinion. These *lots*, having no grass in their yards, will be furnished with green meat, *gratis*.

I am also trying the same experiment with our Cochinchina cockerels at a distance (the results of which you shall hear), and I intend to try the same also with some Spanish poultry.

I will take every care that the trial shall be conducted with the most perfect fairness, and I feel great interest in the result.

I have no leaning one way or the other. I have no object to gain, or prejudice to gratify. I really wish to ascertain, which is the cheapest and most profitable fowl to the cottager. And whilst gladly acknowledging the many merits of my friends, the Cochins, I honestly believe, that as being somewhat of a novelty, they have taken a higher perch in the poultry stage, than they are entitled to, or than they will retain. In the words of the old farce—"I may be wrong, but that's my opinion." But should further experience prove the error, no one will more cheerfully proclaim it, or more humbly acknowledge it than GALLUS.

TO CORRESPONDENTS.

* * We request that no one will write to the departmental-writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of the Cottage Gardener, 2, Amen Corner, Paternus, Row, London."

HOLLYHOCKS.—A very trustworthy correspondent at Durham writes as follows: "I received the following from Mr. Clater, of Saffron Walden: 'I have had undoubtedly thrown all the varieties into the shade:—*Comet* (Clater), ruby-red, large; *John of Arc* (Parsons), large, bluish; *Fairy Bells* (Parsons), crimson; *Magnus Bonum*, maroon; *Metron* (Clater), crimson; *Pulchella* (Clater), pink; *Saffron* (Parsons), pale salmon, a splendid flower; *Triumphant* (Parsons), pale primrose, the very best; *St. Hubert* (Clater), shaded salmon; *Walden Gem* (Clater), ruby-crimson; *White Perfection* (Clater), splendid white. Mr. C. Clater (Clater) pinkish salmon. As the Hollyhock has only lately been introduced into the north as a show flower, I think your numerous readers here might be benefited by such lists from amateurs who have grown such flowers. I am not aware that the information is so much wanted. We shall most readily insert such lists, and any amateur sending us such a list of flowers which he has cultivated and approves, will greatly oblige us:—We are obtaining similar lists from professional gardeners, and begin to-day with the *Dahlia*."

ROOKS.—In reply to P. P., who wishes for information as to the most practical way of establishing a rookery, I beg to state, that the first settlement of rooks upon our property was effected by conveying a nest of these birds, when the young were hatched, and fixing it securely in a tree. My sister gave a darning box a trifle to take the nest, and place it in its new position, from which small beginning a rookery has sprung. I believe the rookery from which the parent nest came was that upon a neighbouring estate, a very few fields from what is now our own; so that the old birds could call to follow the cries of their young. This took place so many years ago, that I do not remember exactly from whence the nest was brought, but it did not come from the nearest rookery. It must have been from one seven or eight miles off, which I think is as far as possible. Beech and Elm are the trees preferred by rooks; our own never fix upon the oaks and limes that stand close to their settlement, but remain exclusively attached to the tall beeches.—R. F. I.

DOUBLE AND SINGLE FLOWER-BUDS.—*Senilis* says, "At page 424 of the last volume, I read, 'We know of no test whereby to know a double from a single Hollyhock before the blossom opens, except that the flower buds of the double are more globular, and larger.' This leads me to inquire, when two of the best and most celebrated Camellia flowers in England (nurserymen) came to see my Camellias. Among other plants I had a beautiful specimen of a seedling Camellia, then in full bud for the first time, but none of them were expected to open before April. The plant had all the appearance of turning out to be the best seedlings of that period; the leaves were as thick and round as those of the old double-striped, or variegated; the young wood was stout and short-jointed, and the buds were as large and round as any in the lot at that stage of development. My visitors made an offer of ten guineas for this plant, and would 'take all chances,' but no! the offer rather turned me the other way. Still I regretted that I did not know of a test whereby to know a double from a single Camellia thus early. A young German, who overheard our conversation, the offer, and my regret, grinned from ear to ear, but said naught until the visitors departed, when, after a little fishing, I got out of him the secret how any flower-bud could be proved as being that of a double or single flower. Cut the bud through the middle, and the secret is out to view—a single folding round the stamens; the double all folds and no stamens. How very simple! but well worth knowing!"

TRA-SCENTED ROSES (Q.).—In very severe weather it is a good plan to cover them with a mat, as you propose; and if you could get moss enough to cover the whole surface of the bed an inch or two, and then stick a lot of small, dry branches, such as the tops of pea sticks, in among them, the frost will not harm them, even in so young a state. Dry sticks, if they are placed thick enough, are much better for protection than boughs of evergreens.

FUCHSIA SPECTABILIS (W. S.).—We are not aware that it has been exhibited at any of the shows, and the less that is said about it the better. Perhaps some of our correspondents could give directions for its

culture. We have one blooming well in a warm border, the pot being plunged there all the summer.

GLOXINIAS (*Ibid*).—As your plants have made no bulbs, you must not let them get quite dry this winter; else they will slip through your fingers.

CANTUA DEFENSIVA (W. S.).—A warm house was sure to play vengeance with it. The very coldest part in the front of a cold pit, where the sun and frost could not reach it, is what it likes.

HICKORY NUTS (H. B. L. N.).—You have brought some Hickory Nuts (*Carya*) with you from Canada, and wish to know the best mode of culture, and in what soil they should be grown. Preserve them in sand, in a cool cellar, and sow them in rows thinly, in the spring, about the end of March. The soil they like is a strong loam, deep and rich, and well drained. Allow them to remain in the seed-rows for two years, then transplant them in October, into nursery-rows, and after the second year transplant them finally where they are to grow to be trees.

PLANTING CONIFERS (M. S.—, Wigton).—You will see Mr. Appleby has answered your queries in several back numbers. If you noticed rightly, the season for planting is mentioned by him to be, *first*, August and September, and then March. The grand object to aim at, should be to plant them at such season as will allow them time to force new roots before the early frosts of winter and the dry weather of spring. The state of the season, whether autumn or spring, will have influence upon the planting. If wet and cold, wait till it is moderately dry and warm. The small bit of a plant you sent we cannot make out. Send it again when in bloom.

BEES.—B. B. says:—"Since I sent you my statement (see pp. 15-16), I have observed in hive No. 2, that the drones are not all destroyed, three or four made their appearance on the 26th of Sept., and about the same time from eight to ten bees arrived with bee bread. I have always been led to consider the appearance of drones at this time is a bad sign. If it be really so, how would you have me act? I have been feeding the bees in this hive for the last fourteen days."

WINTERING SCARLET GERANIUMS (B. B.).—Your frame filled with coal-ashes will do excellently to plunge the pots in; and as you have them already cut back, you will have nothing to do but to admit air to them freely whenever the temperature permits, and to exclude frost by covering the glass with hay and mats. The same treatment will exactly suit your *Verbenas*.

THOUSAND-HEADED CABBAGE (Dorchester).—For late spring-feed for sheep, sow early in March, prick the seedlings out when three inches high, and plant out finally early in July. You may continue planting out throughout August and early September, as more ground becomes vacant. Plant in rows, three feet apart each way.

PLANTS FOR FLOWER-BEDS (*Ignotus*).—We hope to begin the publication of plans next week.

PINE-CULTURE (*Stupid*).—You will have all your queries answered in Mr. Errington's papers.

APPLES (B.).—Six *Desert Apples* for *Esquaters*, good bearers and good flavoured, are Lamb Abbey Pearmain, Kerry Pippin, Old Nonpareil, Scarlet Nonpareil, and Sturmer Pippin. Six *Kitchen Apples* for *Esquaters* are Hawthornden, Alfriston, Wareham Russet, Blenheim Orange, Keswick Codling, and Waltham Abbey Seedling.

LAVENDER NOW BLOOMING (*A Subscriber*).—It is not at all uncommon for untimely blossoms to appear on this tree.

WHITE COCHIN-CHINA FOWLS (*Adipis* wishes to know where, and at what price per pair, he can purchase these. You will see two advertisements of them in our last number.

SPANISH CHESNUT SEEDLING (T. M. W.).—These are quite hardy, and will require no protection.

TOBACCO CULTURE (*A Friar*).—See a very full and excellent paper on the subject in our present number.

AUTUMN PLANTING POTATOES (J. R., Everton).—Dig all your light soil over in November, and plant as it is dug; that is, as soon as space enough is dug for a row plant the sets with a dibble, six or seven inches deep, and do not let the ground be trod upon afterwards. Do not add manure of any kind, but in March sow over the surface *Esopus Salt* at the rate of three pounds to every hundred square yards. Do not plant any but the earliest ripening kinds; the Kempts are too late.

BACK NUMBERS (*Omega*).—If you send as you propose, you can have the numbers and the volume bound? Send a note with them, stating what you wish, and your address. Other questions next week.

ADVERTISEMENTS (*A Watcher*).—It is quite impossible for us to answer for the truth of statements in advertisements. We should have a nice time of it if we had to test the worth of everything advertised. If we are especially asked for an opinion upon any one article, we can do no more than obtain relative information, if possible.

DISEASES OF POULTRY (*Ibid*).—You will confer a great favour by communicating your observations upon this subject.

FORGET-ME-NOT SEED (*Ellen*).—Perhaps Mr. Carter, Seedman, High Holborn, London, can supply you. Have any of our readers some seed of this flower sacred to remembrance?

PURPLE-FLOWERED CLIMBER (*A Subscriber*).—This which you saw against the wall of a villa at Torquay, we have little doubt is *Clematis azurea*. It is highly ornamental, and the more so be prized because blooming in autumn.

LONDON: Printed by HARRY WOODWARD, Winchester High-street, in the Parish of Saint Mary Kalendar; and Published by WILLIAM GOSWELL, at the Office, No. 2, Amen Corner, in the Parish of Christ Church, City of London.—October 14th, 1852.

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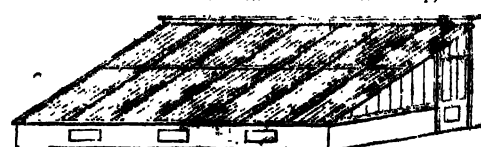
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No. 212.]

THURSDAY, OCTOBER 21, 1852.

[PRICE 3d.]

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THE BIRMINGHAM CATTLE AND POULTRY SHOW 1852.—The Fourth Great Annual Exhibition of Fat Cattle, Sheep, Pigs, and the various kinds of Domestic Poultry, will be held in Bingley Hall, Birmingham, on the 14th, 15th, 16th, and 17th of December next. The Prize Lists, Certificates of Entry, and any further information, may be had from the Secretary. The Entries close on Saturday, the 13th of November. JOHN MORGAN, Jun., Secretary. Offices—2, Insurance Buildings, Union Passage, Birmingham.

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26 "	5 " 6	8 by 6, 8 by 5 1/2	0 15 0
32 "	6 1/2 " 8	8 by 6, 8 1/2 by 6	0 15 0
		9 by 7, 10 by 8	1 0 0

Packed in Crates of 300 feet at 23d, 16 ounces; to the foot, or 14 ounces 23d.

Any of the following sizes at 18s per 100 feet:—

10 by 9, 11 by 9, 13 by 9, 14 by 9, 15 by 9, 16 by 9, 17 by 9, 18 by 9, 19 by 9, 20 by 9, 12 by 10, 13 by 10, 14 by 10, 15 by 10, 16 by 10, 17 by 10, 18 by 10, 19 by 10, 20 by 10, 23 by 10, 25 by 10, 14 by 11, 15 by 11, 16 by 11, 17 by 11, 18 by 11, 19 by 11, 20 by 11, 21 by 11, 22 by 11, 23 by 11, 24 by 12, 17 by 12, 20 by 12, 21 by 12, 22 by 12, 23 by 12, 24 by 12, 25 by 12, 26 by 12, 16 by 13, 17 by 13, 19 by 13, 21 by 13, 22 by 13, 23 by 13, 24 by 13, 25 by 13, 26 by 13, 17 by 14, 21 by 14, 22 by 14, 23 by 14, 24 by 14, 26 by 14.

PATENT SHEET GLASS,

Sold in cases containing 24 sheets, 48 inches long by 36 inches wide—300 feet, at £3 9s per case, net cash. Especial attention is directed to the size, 48 by 36 inches, containing 12 superficial feet, and weighing about 17 ounces to the foot, which is the largest ever made.

FOREIGN SHEET GLASS, of very superior quality, packed in cases of 200 feet, and in sizes varying from 36 by 26 to 44 by 36 inches, at 38s, 40s, to 42s per case.

HARTLEY'S PATENT QUARRY GLASS.

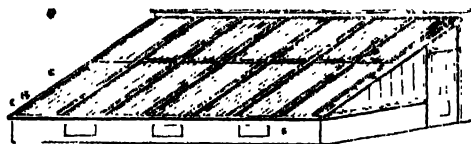
Milk Pans, from 2s to 6s each; Propagating and Bee Glasses; Cucumber Tubes; Lactometers; Lord Camoys' Milk Syphons; Tiles and Slates; Wasps' Traps; Plate, Crown, and Ornamental Glass; Shades for Ornaments; Fern Shades; and every article in the Trade.

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Extract from a letter addressed to us by Mr J. Patterson, of Atherstone:—"I have compared your sample of glass with many others sent me, and I have no hesitation in saying yours is superior to any of them."

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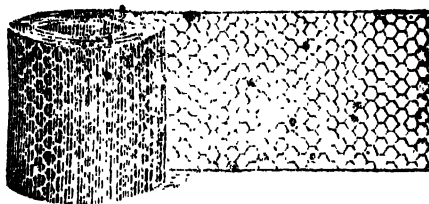
Warranted best Materials and Workmanship, at the lowest possible prices.



J. WEEKS & Co., King's Road, Chelsea, Horticultural Architects, Hothouse Builders, and Hot-water Apparatus Manufacturers. The Nobility and Gentry about to erect Horticultural Buildings, or the Hot-water Apparatus, will find at our Hothouse Works, King's Road, Chelsea, an extensive variety of Hothouses, Greenhouses, Conservatories, Pits, &c., erected, and in full operation, combining all modern improvements, so that a lady or gentleman can select the description of House best adapted for every required purpose. The Hot-water Apparatus (which are efficient and economical), are particularly worthy of attention, and are erected in all the Houses, Pits, &c., for both Top and Bottom Heat, and in constant operation in the Stoves. The splendid collection of Stove and Greenhouse Plants are in the highest state of cultivation, and for sale at very low prices. Also, a fine collection of strong Grape Vines in pots from eyes, all the best sorts. Plans, Models, and Estimates of Horticultural Buildings; also, Catalogues of Plants, Vines, Seeds, &c., forwarded on application.

J. WEEKS & Co., King's Road, Chelsea, London.

CHEAP WIRE GAME AND POULTRY NETTING, 5d per running yard. Galvanized Ditto, 7d per running yard, two feet wide.



GALVANIZED.		NOT GALVANIZED.	
24 inches wide, 2 inch mesh,	7d per yard.	5d per yard.	
30 "	2 " 9d "	6d "	
36 "	2 " 10 1/2d "	7d "	
38 "	2 " 1s 2d "	10d "	

Sparrow-proof Netting, Galvanized, 3d per square foot, made to any size at the same proportionate price. This article was shown at the Great Exhibition, where it was so much admired for its light and durable appearance, and acknowledged to be the cheapest and best article of the kind ever offered. Extra strong-wire Sheep Netting, 3 feet high, is 6d and 2s 3d per yard. Also, every description of Flower Trainers, Dahlia Rods, Garden Arches, Bordering, Flower Stands, Tamping Wire, Trellis Work, Invisible Iron Fencing, Hurdles, and every description of Wire-Work for Horticultural purposes.

Illustrated Catalogues and Patterns forwarded, post free, on application to T. H. FOX, City of London Wire-Work and Iron Fence Manufactory, 44, Skinner St., and 6 and 8, Snow Hill, London.

WEEKLY CALENDAR.

M. W. D. D.	OCTOBER 21—27, 1852.	WEATHER NEAR LONDON IN 1851.					Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bef. Sun.	Day of Year.
		Barometer.	Therm°. Wind.	Rain in In.								
21 TH	Sun's declination, 10° 52' S.	30.076—29.991	62—52 E.	—	—	37 a. 6	53 a. 4	morn.	8	15	20	295
22 F	Coddy-moddy Gull inland.	30.137—29.986	56—50 N.	—	—	39	51	0 3	9	16	29	296
23 S	Wood Pigeon comes.	30.255—33.219	57—50 S.E.	—	—	40	49	1 14	10	15	37	297
24 SUN	20 SUNDAY AFTER TRINITY.	30.361—30.272	57—37 N.E.	—	—	42	47	2 24	11	15	44	298
25 M	Short-eared Owl comes.	30.386—30.348	55—49 N.E.	—	—	44	45	3 32	12	15	51	299
26 Tu	Whitethorn leaves fall.	30.214—30.099	57—42 E.	—	—	46	43	4 39	13	15	57	300
27 W	Tortoise buries.	30.170—30.084	59—37 N.W.	—	—	47	41	rises.	14	16	2	301

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 56.3° and 40.1° respectively. The greatest heat, 73°, occurred on the 21st in 1830; and the lowest cold, 20°, on the 21st in 1812. During the period 80 days were fine, and on 95 rain fell.

ROUGH-LEAVED COMMELIN.

(Commelina scabra.)



This is one of an old genus of herbaceous plants, natives of different countries, some of them requiring the heat

of a stove, others the shelter of a greenhouse, while a third section will stand the rigour of our winters. All of them have fleshy roots or rhizomes, and they belong to the natural order, Spiderworts, the genus *Tradescantia* being the next of the order which is best known to cultivators. They fill up a transition point between the sedges and sedge-like plants, as Nyrds, on the one hand, and the Lilyworts on the other. The genus was named in honour of J. and G. Commelin, two Dutch botanists, by Billemin, a celebrated professor of botany at Oxford, after whom Linnaeus named the genus Billemin. The subject of this biography was introduced from Mexico by Mr. Allardt, of Berlin. It is a half-hardy perennial, and a good figure of it is given in *Paxton's Flower Garden*, ii. 8. Stems in a tuft, milky-green, tinged with red. Leaves stalkless, sheathing the stems, spear-head-shaped, stiff, horny at the edge, wavy, milky-green, covered with rough elevations. Flower-sheath heart-shaped, downy, enclosing from five to ten flowers. Petals dull purplish-brown. The genus is included in Triandria Monogynia, class and order of Linnaeus. B. J.

Culture and Propagation.—These Commelins are not much in favour among gardeners of the present day, but I recollect the time when as much care was taken of them as is now given to the Dahlia. As soon as the frost cut down the stems, we housed the roots, which grow after the manner of Asparagus, along with those of the Marvel of Peru, Dahlias, Carrots, Parsnips, and Beet-root, in dry sand, away from the frost. In the spring, say in April, they were replanted in light, rich earth in the mixed borders, and if we wanted to increase them, that was effected by dividing the roots as you would a Dahlia, taking an eye or eyes along with each portion of roots. D. BEATON.

A CORRESPONDENT asks us whether we think "the Black Violets (*Nigra viola*—Eclogue, x. 39), the Soft Violet (*Viola mollis*—Eclogue, v. 38), and the Pale Violets (*Violas pallentes*—Eclogue, ii. 17), mentioned by Virgil, refer exclusively to our Common Violet?" Without entering into any classical disquisition, or quoting parallel passages from Pliny, Horace, Columella, &c., we reply generally that we believe the references are to one and the same flower, and that that flower is our Common Sweet-scented Violet (*Viola odorata*). "Dark" is quite as faithful a translation of *nigra*, as "black;" when the Violet is spoken of as "soft," it is in contrast to the thistle and other armed plants; and the Pale Violets are quite in unison with our White variety. The same correspondent asks if "our Double Violets are recent results of our floricultural skill?" and we will give a reply in the words of old Gerard, who wrote in 1597—"The Double Garden Violet hath leaves, creeping branches and roots, like the Garden Single Violet; differing in that this sort bringeth forth most beautiful sweet double flowers.—Violets called the Black or Purple Violets, or March Violets of the garden, have a

great prerogative above others, not only because the mind conceiveth a certain pleasure and recreation by smelling and handling of those most odoriferous flowers, but also for that very many by these Violets receive ornament and comely grace: for there be made of them garlands for the head, nosegays, and poesies, which are delightful to look on and pleasant to smell to, speaking nothing of their appropriate virtues: yea, gardens themselves receive by these the greatest ornament of all, chieftest beauty, and most gallant grace; and the recreation of the mind which is taken thereby cannot but be very good and honest: for they admonish and stir up a man to that which is comely and honest; for flowers, through their beauty, variety of colour, and exquisite form, do bring to a liberal and gentle manly mind the remembrance of honesty, comeliness, and all kinds of virtues. It would be an unseemly and filthy thing (as a certain wise man hath said) for him that doth look upon and handle fair and beautiful things, and who frequenteth in fair and beautiful places, to have his mind not fair, but filthy and deformed." Gerard was a sober and ancient herbalist when he thus wrote, and

we might readily believe, even did we not know the flower, that the Violet must have extraordinary charms, when it could thus excite sedateness to be eloquent.

We shall have occasion to dwell more fully upon the admitted virtues of the Violet when we come to it in due course among the "British Wild Flowers," but we must extract here one note from Willsford's "Secrets of Nature," which says, "When *Violets* flourish in autumn, it is an evil sign of an insuing plague the year following, or some pestiferous disease." If this be so, then will 1853 be a year memorable for its pestilence. For we have before us, October 12th, bouquets and growing plants of the most highly-scented and largest *Violets* we have ever looked upon. These are Shackell's *Russian Superb Violets*; they are treble the size, and far more fragrant than the common *Russian Violet* similarly cultivated, and though their leaves are also very large, yet the stalks of the flowers are so long and stout, as to render them very conspicuous. Mr. Shackell has a large stock of every description of *Violets*, and intends to sell them at such low prices as to be within the command of all classes. He will, before long, publicly announce his charges. Even Tree *Violets* will be sold very cheap.

FORSYTH MSS.

At page 185 of our 5th volume we gave a biographical sketch of SIR JAMES EDWARD SMITH, the first President of the Linnean Society, and author of *The English Flora*, and other standard works. The following letter is dated Norwich, September 25th, 1802.

SIR J. E. SMITH TO MR. FORSYTH.

No cause less powerful than the real one should have kept me so long without thanking you for your kind and valuable present of your work, which I now most heartily do. When I received it, I was just beginning to be ill with a fever of violent erysipelas, which detained me a fortnight at Hendon; and then, after my journey home, I was for many weeks unable to look at anything, and in great pain. My complaint is not yet quite gone, but I begin to use my eyes moderately. Your book is in great request here, as it deserves. Mr. Crowe has one copy for his gardener, another for himself, as he makes it his constant study. I have no doubt the general practice of your directions about trees will be of the greatest public use and benefit.

Mr. Crowe and I have again this year been hard at work upon British Willows. Our certain species are about forty. Would it be interesting to you to have cuttings sent you in the winter of all our species, marked with my names? I should be very glad of this, or any other opportunity, of shewing you how much I am, dear Sir, your obliged and faithful friend,
J. E. SMITH.

It may be as well to explain to the non-botanical reader, that the genus *Salix* includes the British Willows, and, in all, about two hundred and twenty-two species, varying in locality from the *Salix arctica*, the last woody plant that lingers in existence as we approach the north pole, to the *Salix Babylonica*, which is found not only "by the waters of Babylon," but in China, Japan, and Northern Africa. These numerous species have been, and still are, the opprobrium of botanists. No one laboured more successfully to arrange them than did Sir J. E. Smith, and his friend Mr. Crowe, until since his death, M. Kech, a German botanist, has

bestowed upon them an amount of knowledge and deep investigation which has left little to be desired.

COVENT GARDEN.

How deep-seated evil practices become! It is upwards of a hundred years since an old writer cautioned the public of that day against the sellers of *Elder berries* and *Elder juice* in Covent-Garden; and it is sad that we should have occasion to do the same now. For a week or two past these commodities have been exposed for sale in considerable quantities. Of the former we need make no remarks, as it is hardly possible that any one could be led astray in the choice of berries, provided they made use of common observation; but against what is sold as *Elder juice* we would have them be especially careful. This article is generally exposed in tubs, and mixed with a large proportion of berries and stalks; but even to a casual observer, the berries show no proportion to the liquor, a great part of which is, in fact, water. "Thus," says the writer above alluded to, "wines and syrups made from *Elder berries* may prove defective, and discourage persons from making a second attempt, by the measure of water with the *Elder juice*, or from blighting causes, or its being expressed from unripe berries." We have thought it our duty to put our readers on their guard against such practices, and would recommend them in all cases, when *Elder wine* is the ultimatum, to provide themselves with sound and well-ripened berries only.

In the fruit-market the supplies have been large during the past week, and the demand little short of what we reported in our last. Everything maintained fully as good prices, and there is every probability they will continue to do so. APPLES, it is generally believed, are a short crop throughout those parts from which "The Garden" supply is generally derived, and I am aware of some cases where salesmen have advised their employers to hold, as there is every probability there will be a considerable rise as the season advances. The varieties which have been most plentiful during the week, besides those which we have noticed in former reports, are *Beauty of Kent*—a beauty, indeed, but this season they are very much deformed, having almost entirely lost their conical shape, and become somewhat flattened and angular; they still, however, retain their beauty of colouring and russety base. This must not be confused with the *Flower of Kent*, under which name it is often met with in the market. Though both are good apples, still the former is by far the better one of the two. It is one of the most magnificent apples we know, when grown to perfection, and is one of the best autumn-baking varieties. *Emperor Alexander*, of which we made mention last week, is in still. It is like a great many more things in the world, more for show than for use; and I would, therefore, never recommend any one who has only a limited extent of ground to think of growing it. PEARS are plentiful, and of all qualities, many of them being, as the costermongers call them, "fine mellow pears." However these may have

done a hundred years ago, they will not do now by the side of *Beurre Bose*, *Duchesse d'Angoulême*, and *Jersey Gratioli*, all of which are now to be had in quantity. The latter is a most delicious, rich, and sprightly flavoured fruit. It possesses that peculiar briskness which is only to be found in a pine-apple, and which one is loathe to call acid; and at the same time is rich and sugary. This is a variety which can be "highly recommended," and which ought certainly to find a place in every garden. *Plums* are going out, and we have nothing new to notice besides what we have treated of in former reports; there are still, however, some arrivals of foreign baking varieties, of what the Germans call *Quetsche* family. The *GRAPES* continue the same as last week, being chiefly *Black Hamburgs* and *Cannon Hall Muscats*. There has been a large arrival during the week of foreign *Black Hamburgs* in baskets, in excellent condition, which fetched from 1s. to 1s. 3d. per lb. There are still some late *PEACHES* to be met with in the first-class fruiterers', but the few remaining *NECTARINES* there are do not seem very tempting. *PINES* are plentiful for the demand, and make from 3s. 6d. to 6s. per lb.

In the vegetable department there has been a plentiful supply. *CABBAGES* make from 6s. to 7s. per dozen, according to the size and quality. The variety which is most extensively grown for the London markets is the *Buttersen*, which is also known in the country by many names, such as "Fulham," "Barnes," "Emperor," and "London Market." *CAULIFLOWERS* are excellent, and vary in price from 1s. to 2s. 6d. per dozen. *BRUSSELS SPROUTS* have come in, and are to be had at from 1s. 6d. to 2s. per half-sieve. *FRENCH BEANS* are less plentiful, and are, consequently, making more money. Some weeks ago they could not be sold at any price, but now they are making from 2s. to 2s. 6d. *CELERY* is very fine; the best can be had at 1s. 3d. per bundle. *TURNIPS* from 2s. to 2s. 6d. per dozen bunches; and *CARROTS* 2s. 6d. to 4s. per dozen bunches. *POTATOES* are on the rise, and likely to continue so; they make from £3 to £6 per ton; the finest are the *Regents*, which are in excellent condition, and make from 3s. 6d. to 4s. per bushel. *MUSHROOMS* still continue plentiful, at last week's quotations.

H.

GOSSIP.

AMONG the very numerous charities at Winchester is *The Natives' Society*, for the apprenticing of the children of poor citizens. It was founded in 1669, but we only notice it for the purpose of quoting some of the prices paid for articles connected with the Society's annual festival in the days of yore.

"1675.—Paid for 9 bushells of malt and girdling, £1 6 0
Paid for halfe a bushell of barley for the
poultry 0 1 0

"1676.—For lemonds, 4d. For aples, 2s. For cabidge and cariot, 1s. 6d. For 4 bushells of wheat, 12s. 6d."

At the *Yarmouth Poultry Show*, Miss E. Watts took a first prize for dark-coloured Cochins-China Chickens, and not a second prize, as stated in p. 418 of our last volume.

There is a brilliancy—a glory—around the fall of the warrior on the field of victory that takes away much from the mournfulness of death. We think we are not wrong in saying that there are few so base as to shrink from facing that death with a firm onward foot, and an unquailing heart, amid the ranks of comrades, and all the excitement and panoply of war. This is courage; but it is courage which excitement would infuse into a poltroon. There is another courage which we consider more admirable, though less appreciated—we mean that of the dying student, who, suffering under the slow inroads of an incurable disease, still labours on in the quiet retirement of his library, intent to fulfil his allotted task, though well assured that death's foot is far advanced across his threshold. This is passive courage—this is genuine heroism—and never was it more forcibly displayed than by Dr. WILLIAM MACGILLIVRAY, late Professor of Natural Philosophy in the University of Aberdeen. The two concluding volumes of his *History of British Birds* have just been published, and these are the contents of their concluding page:—

"Commenced in hope, and carried on with zeal, though ended in sorrow and sickness, I can look upon my work without much regard to the opinions which contemporary writers may form of it, assured that what is useful in it will not be forgotten, and knowing that already it has had a beneficial effect on many of the present, and will more powerfully influence the next generation of our home-ornithologists. I had been led to think that I had occasionally been somewhat rude, or at least blunt, in my criticisms; but I do not perceive wherein I have much erred in that respect, and I feel no inclination to apologise. I have been honest and sincere in my endeavours to promote the truth. With death, apparently not distant, before my eyes, I am pleased to think that I have not countenanced error, through fear of favour. Neither have I in any case modified my sentiments so as to endeavour thereby to conceal or palliate my faults. Though I might have accomplished more, I am thankful for having been permitted to add very considerably to the knowledge previously obtained of a very pleasant subject. If I have not very frequently indulged in reflections on the power, wisdom, and goodness of God, as suggested by even my imperfect understanding of His wonderful works, it is not because I have not ever been sensible of the relation between the Creator and His creatures, nor because my chief enjoyment when wandering among the hills and valleys, exploring the rugged shores of the ocean, or searching the cultivated fields, has not been in the sense of His presence. "To Him who alone doeth great wonders," be all glory and praise. Reader, farewell."

Death, indeed, was "not distant" when Doctor Macgillivray penned those thoughts on the last day of July, for in little more than six weeks he was within his grave. The opinion he had of the work of his dying years, for it occupied twelve, was not too high. We have perused it thoroughly, and we rose from it with the conviction that it is the best work existing on British Ornithology. It is the best for all the reasons that render such a book valuable—for its descriptions are most full and most accurate—its anatomical demonstrations more perfect than any previously effected—and the habits, haunts, and associations of each bird are most pleasingly described, not only with all the freshness induced by personal examination, but with all the spirit of a genuine lover of nature. We have room only for this short description of the habits of the *Red-breasted Goose*.

"In the outer Hebrides, in March, April, and part of

May, and again in autumn, I have seen very large flocks in the small sandy bays, fishing day after day for sand-eels. They sit in the water much in the manner of the Cormorants, but without sinking so deep, unless when alarmed, and advance with great speed. It is a pleasant occupation to an idle scholar or wandering ornithologist to watch one of these flocks as it sweeps along the shores. I have many times engaged in it, both with the desire of shooting some of them, and of studying their manners, which are very graceful. You may suppose us to be jammed into the crack of a rock, with our hats off, and we peeping cunningly at the advanced guard of the squadron, which is rounding the point at no great distance. There they glide along, and now, coming into shallow water, they poke their heads into it, raise them, and seem to look around, lest some masked battery should open upon them unawares. Now one has plunged with a jerk, another, one here, one there, at length the whole flock. Now start up, and if you wish a shot, run to the water's edge, and get down among the sea-weed behind a stone, while from this eminence survey the submerged flock. How smartly they shoot along under the water, with partially outspread wings, some darting right forward, others wheeling or winding, most of them close to the sandy bottom, but a few near the surface. Some flounders, startled by the hurricane, shoot right out to sea, without being pursued. But there, one is up, another, and I must sink to repose in some hole. How prettily they rise to the surface, one here, another there, a whole covey at once emerging, and all without the least noise or splutter. But they are far beyond shot range. However, having come near the next rocky point, they now turn, dive in succession, and will scorn the little bay until arising here at hand they will be liable to receive a salute that will astonish them. A whole minute has elapsed, half another; but now one appears, two, many, the whole flock; and into the midst of them pours the duck-shot, while the noise of the explosion seems to roll along the hill-side. In a twinkling all are down, save six that float on the water, four dead, one spinning round, and the other striving in vain to dive. In less than two minutes they are seen emerging, more than a quarter of a mile out at sea, and presently again they are out of sight. On such occasions they seldom fly."

A correspondent writing to us from Inverness, says:—

"An immense breadth of *Potatoes* is planted here, (chiefly Irish cups); about one-half of the produce is destroyed by the disease, and it is astonishing to me with what cool indifference her Majesty's subjects allow them to remain in the ground to rot! For the life of me I cannot understand this apathy for the potatoes."

"The harvest is completed in first-rate order, and the produce generally abundant. The *Turnip* crops are splendid, with very few exceptions, and some mildew."

"What capital farming, generally speaking, we meet with in Scotland; I admire the quiet method of their proceedings, but the women are worked too hard."

We hear that the first-class collection of *Cochin-China fowls* formed by Mr. Andrews, of Dorchester, have been sold by him to Mr. Cattlin, of London, for £250. We hope Mr. Andrews will address himself to raising a fresh yard of them.

The *Cornwall Society's Exhibition of Poultry*, as stated in our advertisement columns, is fixed for the 10th and 11th of January, 1853. Its premises, considering that it must, from difficulty of access, be comparatively local, are liberal, and its rules good—so good, that several of them have been adopted by the Winchester and Southern Counties Society for the improvement of Poultry. We have no doubt as to the show being good, for the published accounts of the poultry-yards near Penzance shew that they have first-rate birds in its vicinity. We hope soon to publish extracts from those accounts.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

BURY ST. EDMUNDS, Nov. 26 (*Chrysanthemums*). (Sec. G. P. Clay, Esq.)

CALEDONIAN (Inverleith Row), Edinburgh, Dec. 2.

HAMPSHIRE, Nov. 18 (Winchester). (Sec. Rev. F. Wickham, Winchester.)

LONDON FLORICULTURAL (Exeter Hall, Strand), Nov. 9+, 23, Dec. 14+.

NORTH LONDON, Nov. 23, *Chrysanthemum*.

SOUTH LONDON (ROYAL), Nov. 11+, Dec. 9+, 16.

POULTRY SHOWS.

BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.

BRISTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Marmont.)

CORNWALL (PENZANCE), January 10th, and 11th. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)

DORCHESTER, Nov. 18th. (Sec., G. J. Andrews, Esq., Dorchester.)

+ For seedlings only.

FRUIT STORES.

We must break in on the series of Pine papers for a week, in order to offer advice on this head. As to gathering, of course much of that will have been performed. The gathering, however, is pretty well understood; and the amount of care requisite tolerably well appreciated. Some of our late pears will be still out in places, such as the Winter Neillis, the Glout Moreau, Beurré d'Aramberg, Beurré Rance, Neplus Meuris, and some of Mr. Rivers's new continental kinds, of which, as far as tried, we cannot speak very highly in the north; in the southern portions of the kingdom they may deserve a very high character. We are no advocates for letting the fruit remain long enough on the trees to endure several degrees of frost. A thermometer of 28° may, perhaps, do no harm, but lower we would never go if we could avoid it. Indeed, after the first week of October, it is probable fruits receive but little benefit from the tree: that they may receive harm is certain. The juices of the tree become very sluggish after that period, and the elaborative functions of the foliage almost a nominal affair, as far as the fruit is concerned, and this more especially with regard to fruits from warmer climates. And now a few words as to the keeping of our valuable winter apples and pears, about which some difference of opinion still exists. It is evident that the main principles we have to consider in this question are as follows—

The temperature.

The hygrometric conditions.

The action of the atmosphere.

Beyond this, we think nothing of any weight pertains to the question; whether they lie on straw, fern, or paper, or on the mere boards, or on any other material, matters little, only as far as they contribute to the carrying-out the necessary conditions, or of saving the fruit from bruises.

As to temperature, there is little doubt that coolness, or that amount of cold which would be unpleasant to endure sitting in a room, is absolutely essential to the long keeping of fruits. But whilst this is observed, let it not be supposed that a single degree of frost may be permitted. Whatever injury it may do the fruit whilst in a growing state on the tree, there is little doubt that much more injury accrues from such conditions when in a transition state from firmness to mellowness.

Some very peculiar changes of a chemical character are well-known to be requisite, and to take place, unless arrested during the ripening process; the chief arrest being, we imagine, occasioned by sudden and injurious depressions of temperature. Some of our best pears will become, under such circumstances, like petrifications, and totally insipid. What has been termed "bletting," that is a sweet-tasted decay, as in the *Medlar*, is probably thus caused, and, indeed, other evils; this at once points to the propriety of being enabled to remove them, when necessary, to a room where a temperature of 50° to 60° can be sustained at any time. Now, we should scarcely think it necessary to fix a heating apparatus in the general store-room; there should be a special room for this purpose in all gardens of any consideration. The grudging little outlays for this purpose belongs, we would hope, to hygienic days, for the apothegm "what is worth doing, is worth doing well," gathers strength every day, and has long since invaded the precincts of the garden. In planning new fruit-rooms, we would, from a door at one end of the store-room, enter a little snug box, having a heating apparatus of hot water, the boiler outside, and the interior fitted with a few shelves on one side, and a few receptacles, or nests for shelves, on the other, with a small bench for operations. These shelves would be useful in containing those fruits which, at all periods require a higher temperature, as, indeed, all fruits for immediate consumption would do unless quite ripe. The nests, or receptacles, should be a counterpart of a similar set in the general store-room; and these two rooms would have to exchange fruits very frequently: those ripe and to be retarded moved from the warm room to the cold one, and *vice versa*. We are here, as in duty bound, setting forth a somewhat high course of practice; not high through complicated machinery or mighty expense, but involving a little trouble, attention—perseverance, if you will. Those who can afford to do such things, and who turn back in dread, we must pass by for the present. It is no part of the duties of those who attempt to advise in these times to affect a very low standard, carrying a specious appearance of economy outside, but panny wise and pound foolish within. We are aware that not all small gardeners can do these things; still it is well to lead even these to a consideration of principles, and of the ultimatum to which everything in the present condition of society has a tendency.

To resume, then, the course of the subject; having spoken of the warm or ripening room, let us think of the character of the general store-room. This, of course, should be much more capacious; whatever the size of the establishment, we should say as six to two. Here would be permanent shelves for those ordinary kitchen apples, common pears, &c., which, once housed, would not require to be removed. On the other hand, there might be sets of drawers, or trays, of a moveable character, exactly fitting the set of nests or receptacles before described in the warm room, so that one or more might be moved at any time with facility. Thus, then, to put a case: we will say this October the 4th we want to retard some *Delice d'Hardenpont* pears, and to hasten some *Marie Louise*; we will then take No. 1 in the warm room, containing the *Delice*, to No. 1 in cool room, containing some *Marie Louise*, and "sing the changes." Again, No. 15 in warm room is a tray of greengages from a north wall, now perfectly mellow; they must be "cooled down." Let us exchange them for No. 8 tray in the cool room, which contains *Ribston Pippins*, and which will be required in a mellow state for some large parties, who are pheasant shooting in the middle of the month. As before observed, these trays must be made to fit the respective nests with ease; this done, the transit is accomplished without the least detriment to the fruit.

About the modes of heating, &c., we have not space for an observation; such may stand over to the long winter evenings, which approach with giant strides.

We pass on to the hygrometric conditions, our second postulate, the amount of moisture permissible or desirable in the air of the fruit-room. This is a somewhat puzzling part of the question, inasmuch as authorities of high standing, and too respectable to be totally set aside, may be found, who throw their bias sometimes into one scale, sometimes into the other. There can be little doubt, we think, that the epidermis (skin) in fruits acts by transpiration, and that such transpirations is, in a degree, arrested by a somewhat damp condition of air; albeit, as we think, at the expense of flavour and mellowness in fruits. However, in this matter, we ought to distinguish carefully; to keep late apples from shrivelling, and to preserve such things as delicate-skinned pears, plums, melons, cherries, &c., are two very different affairs.

With regard to the varying conditions necessary, and the crisis which occurs from the gathering of the fruit to its consumption, much may be said. Mr. Knight, of Downton, made the following remarks:—"Fruits which have been grown on standard trees in climates sufficiently warm and favourable to bring them to maturity, are generally more firm in their texture and more saccharine, and, therefore, more capable of being long preserved sound than such as have been produced by wall trees; and a dry and warm atmosphere also operates very favourably to the preservation of fruits under certain circumstances, but, under other circumstances, very injuriously; for the action of those elective attractions which occasion the decay and decomposition of fruits, is suspended by the operation of different causes in different fruits, and even in the same fruit in different states of maturity. When a grape is growing upon the vine, and until it has attained perfect maturity, it is obviously a living body, and its preservation is dependent upon the powers of life; but when the same fruit is sometimes past its state of perfect maturity, and has begun to shrivel, the powers of life are no longer, or, at most, very feeble in action, and the fruit appears then to be preserved by the combined operation of its cellular texture, the antiseptic power of the saccharine substances it contains, and by the exclusion of air by the external skin, for if that be destroyed it immediately perishes. If longer retained in a dry and warm temperature, the grape becomes gradually converted into a raisin, and its component parts are then only held in combination by the ordinary laws of chemistry." Thus far Mr. Knight, whose observations went as far in these matters as any man, backed, at the same time, by the most extensive amount of physical knowledge. Now, we have capital illustrations of the soundness of at least one part of Mr. Knight's theory, especially in the *Marie Louise* pear. This we have growing in all forms—on table trellises, the ordinary espalier, the pyramid, and on east and west aspects, and a noble crop we have. Those on a west aspect have a skin like wax-work; those on the pyramid or table trellis, and exposed to every blast, have a russet coating; and those on the east aspect, about intermediate. Now, this has been the case for several years; every year has produced the same results. And what as to flavour and keeping properties? Why, as might be fairly anticipated, just corresponding with the character of the coating, or nearly so. To be nice over such points, however, there is a very peculiar difference between them on the palate, and, for our own part, we can scarcely tell which to covet; our worthy employer, however, who is as keen a judge as most gentlemen, and has a most extensive knowledge of fruits, seems always to prefer those with waxy skin, from the western aspects; and, indeed, they are larger, perhaps more melting, finer in texture, but

assuredly a lighter flavour, though excellent; but to be fair, those from the standards in our north latitude have a kind of snatch of the widdings in them, which, to some palates, is not disagreeable.

It is to be feared that these observations will appear too digressive, and we must hasten back to the main features of our tale. There can be little doubt that apples, especially the ordinary kitchen kinds, endure and enjoy a greater amount of danger than pears, or, indeed, any thin-skinned fruits. They have been well-preserved in ordinary cellars, nay, in pits, or "hogs," and, indeed, much beyond their ordinary season by such means, but, as before observed, at the expense of flavour. This is, however, another argument for the necessity of two rooms. If we must be compelled to keep a general store of all kinds together, we should prefer a room on the north side of an existing building, the floor about a foot above the ordinary ground level, and the exterior walls double, possessing a cavity of about six or eight inches all round the exterior. In the roof, we would have escapements for damp, to be opened at pleasure, and capable of graduation; and we would have similar openings in front, at two levels—one portion just above the floor, and the other near the top of the room. The admission of light need not be the means of ventilation; windows must be, of course, provided, in order to facilitate, when necessary, any arrangements connected with the fruit. This, however, is but a "lumping" of matters; whilst we write thus, we are perfectly assured that some fruits are the better for a moderate amount of moisture in the air; others the worse; and, as Mr. Knight observed, the same fruit at different periods requires varying conditions, in order to bring out its qualities in the highest perfection.

Want of space prevents our pursuing this interesting disquisition as far as existing facts would warrant, and we must pass on to consider

The Action of the Atmosphere.—We are afraid that in discussing this portion of the question little heed will be paid by some to its importance. There can be little doubt, however, that it is a question worthy of much consideration. As for the first gathering of the fruit, within a couple of weeks after which the fruit undergoes what is termed sweating, a most liberal ventilation is necessary to ordinary fruit. Here, again, the propriety of having two rooms irresistibly forces itself on our notice. But these things accomplished, a moderate course becomes necessary; and, indeed, towards Christmas, rooms in general require to be hermetically sealed, as it were. That the more rapid the current of air that passes over them, the greater the detraction of juices from the skin of the fruit, there can be no doubt; but this would seem to be, in some cases, necessary to produce flavour. However, any stagnation arising from moisture in excess must be dissipated by such means, or by heat; and, as before observed, we would have the ordinary stores kept in a cool condition. Whilst, therefore, the warm room would seldom require much air, the cool or store-room would require at times a liberal amount; all this determinable principally, if not entirely, by the character of the air within as to its amount of moisture.

Light.—This, although not placed amongst the conditions for consideration, is a most important affair; in former days paid little attention to. Now, however, the importance of darkness to fruit is almost universally recognised; and most practical men keep their fruit-room shutters closed. This it was that made us suggest ventilation by other means than the windows, for cases frequently occur when a circulation of air without light is essential. Every body knows that fruit is liable to acquire a tendency to breed those obscure cryptogamic bodies commonly termed "moulds," and that these, however induced, are increased by a damp air, and by light.

These are frequently induced by bruises; but some kinds of fruit show an evident predisposition to the produce of this pest. We have reason to believe that darkness is unfavourable to its spreading, and, if so, is another reason for keeping closed shutters. Although the patience of our readers may be exhausted by so much about fruit-keeping, yet we will not confess to the subject itself being exhausted; enough, however, has been said to set our readers thinking for themselves.

R. ERRINGTON.

SENDING PLANTS TO AUSTRALIA AND ELSEWHERE.

This subject occupied nearly as much of our attention for the last two years, as that about bees and poultry; and no doubt, when the flush of the diggings is over, and people there return to their senses, their cottages, and cottage gardens, we shall have an extended sale for our publication in those quarters, and a new impulse will arise in the trade in plants between the two countries. Until the Isthmus of Panama is smoothed down for steam carriage, it is still the safest way to send plants round Cape Horn for the different ports in Chili and Peru, and the trade from London to those ports, as I shall presently show, is reported from the nurseries, and the last accounts from the Cape of Good Hope bring whisperings of gold stores, where the old Caffir Chiefs will one day or other join issue with General Cathcart himself, and his "burgher levies," in a different game, after casting their swords and spears into the Fish River. Here, then, is another opening, in anticipation, for our nurseries and emigration societies to pour in their accumulated stores, to say nothing of the Indian and China market, upon all of which it is better to keep our eye than to sleep with one eye open. I was at Oxford the other day, where I made a whole budget of university, or rather universal, news about gardening, and having, by mere chance, got into conversation with patrons of THE COTTAGE GARDENER, who were discussing the merits of the different ways of transmitting plants to distant parts, I learned that Mr. Low, of the Clapton Nursery, was in the constant habit of executing orders for Australia, New Zealand, and South America; but to make sure of the point, I returned to London the same evening, all in the dark, for the people of the "Great Western" do not provide lights for their second-class passengers like the South Western Company, in whose carriages you could read the small print edition of Uncle Tom's Cabin any night in the week. I was in Clapton just in time to see a large case of plants packed for New Zealand, and another one in progress for Valparaiso. I also saw two more orders, one for Brazil and another for the West Indies. The latter is to be sent out on Ward's plan, and the case is to be returned with broad-fruit trees and others that are scarce in the trade. What was better than all, the packer is an old play-fellow of mine, Mr. McDonald, a well-known gardener of great experience and skill; and, as a matter of course, he made no secret of his way of packing, which is so sure and effectual, that large orders are sent to Mr. Low from the most distant parts, through no other interest than the celebrity of his packers. Indeed, a letter was pointed out to me in proof of this, from the same British resident in Valparaiso to whom the present consignment is to be sent, in which he states that the last plants he had from Clapton arrived in as good health as when they left Clapton, and that some of the Rhododendrons and Camellias were in full blossom when he unpacked them.

From the end of September to about Christmas, Mr. Low thinks is the best time to pack plants for such long journeys; but he has packed in all seasons. The case

that I saw packed for New Zealand is going out with a reverend gentleman (Mr. Baily), who is going on a visit to Taranaki. It was four feet six inches long, nearly two feet deep, and as much in width, of strong one-inch deal; one-half of the plants were packed with the roots in the packing materials, placed against one end of the case, the other half at the other end, and thus their heads met in the middle of the case free from any packing-stuff. I was told that a few holes were to be made on either side of the case in the middle, to let off any damp or vapour from the leaves or packing stuff, but not so large as to admit a mouse. The whole was nailed down firmly, the case they strongly corded, and the address was painted on the lid; and, as an additional strength, strips of half-inch board were nailed all round the case in the middle, and also at both ends, the cords running close to these strips, so that they could hardly be "chaffed" or worn by the tossings of the vessel in bad weather. The plants were of a mixed character, twenty-four of them being shrubs or trees, and a dozen Pinuses, and other things of which I did not think it worth while to take the names, as none of us know really what is most in demand either in New Zealand or Australia; but I expect soon to get a sight of a very long and interesting letter, written from Australia, in which a great many things are explained respecting the gardening want of the different settlements, as well as the gardening gossip of the day in these parts. This is just what every one that is interested in the subject wants to know.

I copied the following digest from the invoice going out to Valparaiso:—450 *Camellias*, 100 of which to be the old double white; 240 maiden plants of twelve kinds of *Plums*; 25 *Ribes sanguineum*; 12 of the *White Ribes*, a variety of *Sanguineum*; 100 newest *Dahlias*; 6 *Stanwick Nectarines*, and 50 *Daphne indica rubra*, together with a host of single plants, many of which, I could vouch for it, were culled from the pages of THE COTTAGE GARDENER. Our friends in South America thus seem to have as much confidence in our recommendations as their brethren in the United States, who, as Mr. Brint, of Philadelphia, told me last July, have the fullest confidence in whatever appears in our pages about new plants. How lenient, therefore, ought our home correspondents to treat our hesitations about getting up lists of such-and-such plants on the spur of the moment, when we have such a weight of responsibility, that ought to be most conscientiously discharged for the good of all parties.

The principle of the mode of packing adopted in this nursery is that which I have all along recommended, but the application of it is different. First of all, the plants are well watered, so as to have every part of the balls wetted through and through; they are then put aside to allow sufficient time for draining off the superfluous moisture. Meantime, a quantity of moss from Epping Forest is thus prepared:—Take a large tub, and pour a potful of water into it, then put in as much of good sandy loam as will form the whole into a thick puddle, or paint; now throw in a quantity of moss, and work it with the puddle, taking care to have every particle of the moss smeared with the compost; with this daubed moss cover each bulb half-an-inch thick, and fasten it round with strings of fresh matting, or small twine. When the whole are thus finished, begin to pack, by placing an inch of perfectly dry moss on the bottom of the case, at one end; on this place a row of the balls on their sides, with the bottom of the balls facing the end of the case, with another inch of dry moss intervening between the balls and that end. The balls being round, there will be little empty spaces between them at top and bottom; these spaces must be filled up with more daubed moss. We have now one layer of plants with their heads lying towards the

middle of the case, a bed of dry moss under and behind the balls, but nothing yet in front of the balls, or what was the surface of the pots. Along this front a layer of the dry moss, two inches thick, is very closely packed, and a piece of stout deal, or board, the exact size of the width of the case, is placed closely against this layer, and nailed at both ends from the outside of the case; the next layer of plants is then packed over the first, and pressed down so as to get bedded in the puddled moss, dry moss being placed all round, as with the first layer, and the interstices filled up with the puddled moss; another bar across as before, and so on till that end is filled, finishing with a layer of dry moss, on which the lid rests. Then finish the other end of the box, or case, just in the same way, and when the lid is nailed on let us turn up the case on one end, and see how the whole stands with the mind's eye. The whole mass in the centre, within the dry moss, is in that state we call neither wet nor dry, and so close throughout that no breath of air can get into it. This of itself, in a wooden box, would remain a long time sufficiently damp to keep the plants alive in their dormant state; but see how things would turn as soon as the vessel got within the tropics—even if there was no jolting of the vessel all the time to disturb the puddle, the wood would not be proof altogether against the heat of a vertical sun, and the damp of the moss would, in time, rise in vapour, and smother the leaves, rot the young shoots, and probably destroy every plant long before they reached the latitude of the Cape of Good Hope; but the firm lining of dry moss—and it must be very firm indeed, and so must the whole mass—is found in practice to be quite proof against any dispersion of damp or vapour whatever, as well as being one of the best non-conductors of heat; and, like the proof of the pudding, all this has been proved in a hundred instances, over a great many years, and to all parts of the globe. I dare say Mr. Low, Mr. Veitch, and all the nurserymen who import plants largely from distant parts, could tell of the hundreds of pounds that have been utterly lost to them from bad packing; and no doubt this system has been arrived at bit-by-bit, although they do not like now to rake up these unpleasant recollections, to which I could myself add a mite or two as big as a locust, if it were to any good purpose; so that my hasty return from Oxford, *all in the dark*, to learn a better system, may be the more easily accounted for, although I must go back, *some day* or other, to finish my notes on the interesting things I left unnoticed this time.

As far as I could make out from the explanation of Mr. McDonald, the great packer, loam is better for puddle than clay, as if it should get too dry, it does not bind so hard as clay would do to injure the roots; mixing it with moss gives a double chance, or rather three chances to one in our favour, for it keeps the whole open, as it were, for the roots to work into the puddle, should they be excited in running through the hot part of the journey, and all gardeners know that roots will run along vigorously on the least application of heat, although the branches be leafless, and encrusted in frost or snow:—make a hot-bed over the roots of any of our hardy trees next winter, and prove the fact, if you doubt this. Indeed, although I cannot explain my meaning so as to make it as clear as I should wish it to be, I am almost sure that the turning point in this safe way of packing, is in allowing the roots to extend freely under high pressure, so to speak:—we have all of us seen trees that have been felled in February brought into full leaf by a few April showers, and that accounts for the effect of the small holes in the sides of the packing case, letting off the vapour that might endanger the heads of the confined plants on this voyage. But there is another turning point. As soon as the heat converts

the dampness of this puddle into vapour, the moss in it sucks it up like a sponge, and on getting into cooler quarters, the loam sucks it back from the moss, and so by a system of "give and take," the moisture is retained in the moss for a very long time, much longer than could be expected from either the moss or the loam by itself; at any rate, the effects are now fully known and taken advantage of, whether we can explain them properly or not.

One remark which Mr. McDonald made to me I cannot withhold, as it may be of use in extreme cases. He said that, if this box was placed inside another box that was one inch larger all round, and that inch space filled with charcoal dust, the whole might go to Taranaki and back again with perfect safety to the plants. I also learned that a hundred plants, including fruit-trees, might thus be packed, and sent on board in London, at from 1s. to 1s. 6d. per head. D. BEATON.

NOTES ON WINDOW-GARDENING.

WITH all the deficiencies that exist in this department, there are great and pleasing signs of progress. Often have I witnessed results that would constitute no inappropriate lesson to the best gardeners among us. These happy effects are never the consequence of what the indolent too often term "a lucky hit," or "a lucky chance." I have no faith in such chances. I look upon the expression, "lucky fellow," as one which ignorance too often trippingly uses for shrouding from itself its own thriftlessness, idleness, and impudence. From the window of the lady's boudoir, to that in the garret of the street apple woman; from the balcony in a suburban retreat, to the smoky leads on the summits of houses in London, I have seen plants beautiful and flourishing; but never as a matter of "luck," but always the consequence of care, cleanliness, and good management, commingled with something of the enthusiastic for all that pertains to vegetation. Nor is this all. Whatever there may be in the strange principles of mesmerism, there can be no question, that the tending of plants from *love* to them, will always exert a softening and refining influence upon human character. Without that *love*, plants may be well grown as a matter of speculation and trade, but without it, and no pecuniary object in view, we shall see little of fine gardening in our cottage windows. This becomes a matter of no little moment, if it be true, as we contend it is, that the condition of a garden, and the state of the window plants, form no bad criterion of the tastes and aspirations of those who reside within. Would that Britain's daughters would clearly see how easily youthful swains "might thus take their notes," and read their character.

Our Editor might well say it was difficult to please every one. Some have complained that we devote too little attention to this interesting subject; while others, again, say "You are always dabbling about the windows, as if there were no other place in which to grow and keep plants; can't you present the subject under entirely new features?" There is the difficulty. It is an easy matter to fabricate, or borrow a new idea, and back and ride it right valiantly, heedless of consequences; but, much as we like novelty, we like those things that are practically demonstrated much better, and writing for the *practicals*, truth obliges us to say, that in this window-gardening concern we are really at a standstill for the *novel*. Almost every plant most suitable for window-gardening has been mentioned; the mode of cultivation alluded to; everything connected with economy, taste, suitability to the circumstances, adverted to and elucidated; and I hesitate not to say, that the various papers scattered through the work, if collected and arranged, would constitute the best treatise on the

subject that has ever appeared. Then why allude to the subject now? Many reasons might be given. Let three for the present suffice. Many are now trying their hand who have read but few of these papers. Many say that they have *tried* hard to work according to rule, and yet have not fully succeeded; and many, again, care less for winter display than making their windows repositories for plants to bloom out-of-doors in summer. From what we have been told, and what I have seen, I can clearly see several causes of failure, and these obviated, as many means of success will be secured. We may so far avoid the one, and secure the other, by attending to the following propositions or directions.

First. *House the Plants, or get them under shelter early in October.* In the northern counties temporary protection should be secured by the end of September. Few window-gardeners will content themselves with one set of plants for the season. They best show their knowledge who can have their windows always fresh and gay with successions of plants and bloom. For this purpose many things may be kept out-of-doors during the summer, and in many cases, cuttings taken from flowering plants in spring will beat their sires in autumn. In a warm, dry autumn, the longer the plants stand sheltered in the open air the better. Their stems thus get more thoroughly matured. Some, of course, want more hardening than others. I lately mentioned all the broad sectioned tribe of *Cacti-Epiphyllums* as being well-suited for window-gardening. Their blooming well in spring and summer depends on the quantity of bright light that plays on their stems during the previous autumn. Clear sunshine, and comparative dryness at the roots, are the things to aim at. A soaking at the roots *now*, would give so much moisture to the stems, that the muggy atmosphere of a whole winter would scarcely evaporate it. A very little frost would also injure the embryo-buds, though as yet next to imperceptible. Geraniums and other things are also injured by both such means. A miserable sickly hue during the whole of the winter is often the result of a few hours frost or sleet in autumn. If circumstances compel you to keep your plants out late, provide a temporary covering that you can throw over them in a moment of emergency. A light shed, an empty room, anywhere, where light and air can be given, will be a more secure place than out-of-doors, after the commencement of this month. Plants, however tender, will stand a great degree of cold, if they are dry.

Secondly. *Shift and pot early, and, as a pre-requisite, strike cuttings early.* Plants, whether old or young, if growing freely, and fresh roots reaching the sides of the pots, will stand rougher treatment, and require far less trouble in winter, than plants whose roots are beginning to move into fresh soil. Every little oversight, such as too much wet or too much dryness, a moist atmosphere or a dry one, a cold air or a warm air, are apt to be injurious to the latter. The poor things resemble a man with several enemies, who has got no wall against which to plant his back,—no firm yet gently-yielding ground on which to rest his feet. The transplanting of a cutting, or the shifting of a plant pretty well established from one pot to another, always is accompanied by a check to the growing principle. Where conveniences exist, we neutralize these as much as possible by close pits and shading, to lessen evaporation, until the roots are again fairly at work, and thus we submit to a present inconvenience in hopes of obtaining a future advantage. But our window-gardeners are, generally, not overburdened with conveniences; and their only chance to have plants in a nice healthy state in winter, is not little after the first of September. It is true, many things may be potted now, but they must rather be viewed as reserves for the future than ornaments for the present.

3rdly. *Bulbs, such as Narcissus, Tulips, Hyacinths, Crocus, &c.*, to bloom in winter, or, rather, in windows in spring, should be potted early likewise; and when placed in a cellar, or in a corner of the garden, covered over with ashes or dry earth. The pots may be brought in to the window when the pots are filled with roots, and the leaves and flower-buds appearing. A slight shading will be wanted at first; a paper funnel, the broad end over the pot, and the small end with a hole in it to admit a portion of light, is useful for this purpose, and also for drawing up the flower-stems of Hyacinths, so as to give the flowers room to expand.

4thly. *In potting in autumn, use uniformly light, sandy soil, in rather a rough state.* That which may be obtained by the sides of highways, as the accumulations of road-drift and scrapings, old and well aired, will grow seventeen-twentieths of the plants usually cultivated in windows. A little rotten dry leaf-mould may be added if come-at-able, or even a little sandy peat, or a little broken charcoal; but rotten dung should never be used at such time as a component of a compost. If extra vigour in particular cases is required it can always be given by surface-dressings, or manure-waterings. Many render their plants sickly by placing crude matter about their roots, which, when water is applied, gets into a sour soapy mass. They treat, in the short days of autumn and winter, a pot plant in a window, just as they would treat a carnation plant in summer. The growing and the flowering principle are just at the antipodes of each other. *Robust, rather than luxuriant, vigour*—the greatest quantity of bloom in the smallest possible space—ought to be the aim of the gardener. Need I say that the pots should be drained so that the water passes easily through them.

5thly. *Water carefully.*—Easier said than done. Water thoroughly when you do water, so as to reach every fibre; wait patiently till the plant is dry, and then repeat the operation, is the whole principle involved. And yet, how few understand it; or, if comprehending it, practice it. I believe that nine-tenths of the deaths of plants in pots are owing to the water can. The reasons of this have been fully explained. The dribbling system, in course of time, leaves the mass of roots as dry as an unused whistle, while at the surface there is a continual struggle between roots being scorched up at one time, and making fresh efforts for existence at another. To the question so very often put, "How often shall I water my plants?" no more definite answer can be given than, "Just when they need it: let them drink only when they are thirsty." Heat and light, the perspiring processes going on, the state of the plant—whether growing or resting, whether in bloom or maturing its growth, whether succulent-stemmed or hard-wooded—must all be taken into consideration, and then it will be seen not only that there is a little philosophy in the growing of a plant, but that the plant that may require a refresher twice a-day in July, may be amply supplied with twice a-week in October, and twice a-month in December. As a general rule, unless when flowering or showing bloom, succulents will require little water from this time until April. On the same principle, Scarlet Geraniums will suffer less from dryness than florists' Pelargoniums; and these, again, will not suffer so much as the harder-stemmed fancy varieties. From this time until May the water used should be soft, well-aired, and not lower in temperature than from 52° to 60°, unless in particular cases, such as when a plant has become very dry; little or no water should be allowed to stand in the saucer, never to rise higher than half the height of the drainage during the dark months.

6thly. *Strive to keep the plants in small pots.* You will not only thus save room, command the greatest amount of bloom in the space, but have the means of arranging your plants in fresh combinations, in vases, boxes, or

baskets, in moss, &c., at pleasure; and thus the watering be reduced to a minimum of labour and care.

7thly. *Never hesitate to sacrifice a small present pleasure to realise a high future enjoyment.* Here is a Fuchsia, beautiful in summer, has still a few flowers at the points of its shoots, and for the sake of a flower then and now, you are to keep it in during the winter, though its thin and sickly foliage already gives one the blues. If turned out in the sun a month ago, housed any where from frost in winter, pruned, and fresh shifted in spring, you would have had something to look at next season. Here is a Pelargonium, lanky and bandy-legged, having a few stray flowers since August. What can you do with it now? If you cut it down, it will be mid-winter before it breaks, and how wretched-looking before. The cuttings will be useless, or involving more trouble than they are worth. If this plant had been cut in, pruned in July or August, the cuttings would have been nice little plants now if you wanted them. The old plant would have broken afresh; you could then, by removing the old soil, have shifted into a similar or a smaller sized pot, have had a pretty bush to survey all the winter, and the hopes of a fine sight in spring and summer.

8thly. *Never, if possible, give a check to roots and branches at the same time.* Our last example of the Geranium will shew this. We prune back the unmutated roots and stem, cause fresh roots to be produced, and when these are several inches in length, we slightly prune and disentangle the roots; and the young shoots, by a reciprocal action, cause fresh roots to be formed. Now we might prune the top, and fresh pot at the same time, and yet succeed; but we should lose time by the process, and in delicate cases lose the plant too. See, some time ago, some most valuable suggestions on transplanting, by Mr. Beaton.

9thly, and lastly for the present. *Attend to cleanliness.* Look on the leaves of plants as performing functions analogous to that of your own lungs; and a covering from dust will be secured for them at one time, and a sponging with tepid water no stranger at another. And the best of it all is, that the more trouble you bestow on your pots, the better you will like them. R. FISH.

JOINTINGS BY THE WAY.

(Continued from vol. viii., page 415.)

OSMASTON MANOR, THREE MILES FROM ASHBORNE, DERRYSIRE, THE RESIDENCE OF F. WRIGHT, ESQ. Mr. Lamb is gardener there.—This is quite a new place. We have already noticed it when writing on Conifers, showing how they have planted a considerable number of *Cedrus Libani*. We have now to add a few notes on the new gardens. The vineries are built on the same plan as those mentioned by Mr. Fish, at Kingston, in a late number—that is, a rather flat ridge-and-furrow-roof. The vines are progressing favourably. In the centre, across the house, is a strong shelf; on this shelf Mr. Lamb had placed vines in pots, which produced some fine fruit, of a good colour, and excellent flavour. The vinery, for there is one finished, is made use of as a plant-house as well, and had in it some well-grown specimens of stove plants, particularly *Alamanda cathartica*, *Echitis splendens*, *Stephanotis floribunda*, *Schubertia gracilens*, *Gaphistemma pulchellum*, and several species of *Eschynanthus*, all in flower. There is also a range of plant-houses, one half of which only is complete. In a stove house we noticed a very fine spike, with several branches, of that difficult orchid to bloom, the *Renanthera coccinea*. The plant was healthy, and of a dark green. The method of causing it to bloom was first to grow it freely, and then give it a severe rest. *Oncidium papilio*, the best variety, had seven

blossoms expanded, and was a large, healthy plant. The collection of orchids, however, is but small as yet; but it is intended to increase them much as soon as the entire range of plant-houses is finished. In the greenhouse the *Mandevilla suaveolens* was finely in bloom, also a good specimen of *Solanum jasminoides*, and *Kenedya Maryattii*. There was also several standards of that fine old plant, the *Climanthus puniceus*, which is a novel but very striking mode of growing this plant, worthy of imitation. In an old greenhouse near the mansion there was a fine standard, in full bloom, of *Bignonia grandiflora*, with its large, trumpet-shaped flowers. The stem was more than six feet high, and the branches drooped round it in the umbrella form. It was a striking and ornamental object. In the centre of the garden is a very remarkable object—a lofty stone tower, with a winding staircase, which leads to the top. From this elevation splendid views of the surrounding country are seen. The use of this lofty tower is to convey away all the smoke, not only from every fire in the garden, but also from the dwelling-house, or mansion; so that there are no chimneys to be seen on the premises; yet, though cooking was going on in the kitchen, very little smoke appeared to issue from the tower. We had the privilege of seeing through the house, and were much pleased therewith. Everything is on the largest scale to save labour. Ascending and descending platforms convey coals, and every other needful thing, to the level of each tier of rooms. Water, too, is conveyed by machinery, and every possible convenience is managed on the most approved modern practice that science and skill can bring into play. Indeed, the description of this place, from the number of interesting and useful objects in it, would fill a rather formidable volume, especially when everything now in contemplation is finished.

To return to the garden. The garden walls are hollow, and near the ground have hot-water pipe inside the hollow to heat them. These answer well. Though the peach-trees have only been planted three or four years, they were bearing some excellent fruit, and were very healthy and vigorous. The walls are covered at the top with a projecting iron coping, with contrivances for hanging protecting material; canvass, for instance, from them down to the ground. An excellent plan. The trees are trained to iron-wire-rails, stretched out, against them, and about eight inches apart. There did not seem any difficulty about training them, and they are certainly neater than the old method of nails and shreds.

The next place we visited was *Rollston Park*, the seat of Sir Oswald Mosely, Bart. Mr. Atkinson is the gardener. This place we have often referred to, on account of a remarkably fine *Abies Douglassii*, and *Pinus Sabiniana*. Both these fine specimens continue healthy, and are progressing quickly. The *Abies* is now nearly forty feet high, and twenty feet through, very densely clothed with branches. The *Pinus* is quite as high, but is not so dense; the stem is full three feet round. There is also a good specimen of *Abies Menziesii*, fifteen feet high, and many others very interesting, which our space forbids us to dilate upon. We must, however, mention, that on the walls in the kitchen-garden was a large crop of excellent peaches and nectarines, and a great crop of melons in the pits.

On the front of the vineries is a large square of ground planted as a botanic garden, according to the natural system of Jussieu and Decandolle. Sir Oswald Mosely is passionately devoted to his garden, and is a fine old English gentleman, even of the present day. The place is well worthy of a visit. The gardener, Mr. Atkinson, has been there about twenty years, and is a man of science and unassuming manners. He has a very respectable collection of stuffed birds, all cured and set up by himself during his leisure hours. It would be

most beneficial if every gardener was encouraged to do so likewise.

T. APRILEY.

(To be continued.)

THE TALL LOBELIAS.

THAT these are florists' flowers, in the sense that term is used, there can be no doubt. Mr. Glenny's rules, by which we may distinguish this class of plants, are—1st, The power to be perpetuated and increased by slips, and other modes, independent of its seed; 2ndly, The power to produce new varieties from seed, capable, like their parent, of being perpetuated; and 3rdly, it must possess sufficient interest and variety to be grown in collections. That these rules are just and correct, we need only glance at such plants as *Calceolarias*, *Cinerarias*, *Carnations*, *Dahlias*, and the like.

Though the Tall Lobelias have never, that we know of, been shown in collections, or had prizes offered for them, yet there is no reason why they should not. In respect to brightness, and variety of colours, they are surpassed by few, especially in that always-admired and far-off-to-be-seen colour, scarlet or crimson. That they may be greatly improved is certain, from the progress already made; witness the variety named *Queen Victoria*, compared either with the original species when introduced from Mexico, and named *Lobelia fulgens*, or with the old *L. cardinalis*. With regard to diversity of colours, we have already a goodly assortment, ranging from pure white to pale blue, dark blue, purple, scarlet, and crimson. There is variety enough even at present; and if our indefatigable friend in such matters, Mr. Beaton, would try his practised hand at them, we have not the shadow of a doubt but he would, in a few generations, produce all the colours of the rainbow. When I have got over the hurry-scurry of establishing myself in my new occupation, I shall try my unskilful hand at them, and trust many of our florist friends, with their usual perseverance, will also work in the same field, and I am sure then we shall have a very superior race of tall Lobelias.

To forward so desirable an end, I shall write a few brief papers on this fine race of really showy plants, whether cultivated in pots to be exhibited in collections, or as ornaments for the flower-gardens, grown in masses in, as it is called, the bedding-out system; and for this latter purpose Mr. Beaton will wish every success.

There is no doubt that the hardy species from North America will hybridise with the more tender ones from Mexico; and thus we shall attain, in a great degree, another desirable object—the acquisition of a more hardy race. Botanists rejoice when their specific distinctions can be preserved intact, and in the case of orchidaceous plants they are quite safe; but there is scarcely any other tribe of plants with which the hybridiser does not make sad havoc (as they think) with pre-conceived notions; so that at this day there are thousands of so-called species that may be changed, and, as far as beauty of colour, form, and substance are concerned, be improved, by cultivation and cross-breeding. This improvement has been, and will continue to be, a source of never-failing, innocent, healthful, and amusing occupation to hundreds of human beings. Premising thus far, we shall return to our object—the cultivation and improvement of the Lobelia.

As there is nothing like order in every proceeding, I propose to arrange our subjects under the following heads:—1st, Propagation, by seed, by cuttings, and by division; 2nd, Soil; 3rd, Cultivation in pots for exhibition; 4th, Hybridising; 5th, Preserving through the winter.

Propagation by Seed.—As these Lobelias flower late in the year (that is in August), by the time the seed

is ripe it will be too late to sow it, unless the raiser has the convenience of a greenhouse. I will, in the first place, suppose he has not, then the seed must be gathered, cleansed from the seed vessels, and carefully preserved in paper in a dry, cool room, till March; then prepare some light soil composed of sandy loam, vegetable mould, and sandy peat, in equal parts. Mix these well together with the hand, and let the soil become partially dry; then shift a portion of it, for the surface, through a fine sieve; reserving the parts that will not go through the sieve. Procure some wide, shallow pans, with a hole in the bottom to let out the superfluous water; place over the hole a large piece of broken potsherd, or an oyster shell; then cover the bottom of the pan with a layer of smaller potsherds, and upon them put an inch or two of the rough siftings of the compost; press this down level and firm, and then place upon that a layer of the compost unsifted; let this layer very nearly fill the pan. Upon that, finally, put a thin layer of the sifted compost, level it down, and press it gently with a smaller pan, or a round, flat piece of wood made on purpose. Then water gently, but sufficient to wet the whole thoroughly through. Let it stand an hour, to allow the water to settle through, and the surface to become partially dry. It is then ready to receive the seed. As this is almost the smallest of all seeds, it must be, as it were, dusted over the surface, and some very fine powdery compost dusted as thin as possible upon it. Press this very lightly upon the seed, but give no water—the moisture in the soil below will ascend and moisten the seed and its light covering sufficiently for the time. Place the pans in a cold frame, or, what is better, upon a very gentle hotbed, under glass. If the cultivator has a greenhouse, the seed may be sown as soon as it is ripe, in the same manner, and be placed upon a shelf near the glass. In either case, as soon as plants come up, and can be handled, prick out the seedlings thinly in other pans prepared similarly to the seed-pans. There will be this advantage in the autumn-sowing, that the plants will be forward enough to plant out in nursery beds earlier in the following season than the spring-sown ones. It is very likely some will flower that season, and the best only should of course be kept, the rest will do to plant out in the borders of the flower-garden, or be thrown away at once. Such as do not flower should be taken up in the autumn, potted in small pots, singly, and placed either in a greenhouse near the glass, or upon a bed of coal ashes in a cold frame, well protected from frost till spring, when they should be planted out again to prove them.

T. APPLEBY.

(To be continued.)

CONIFERÆ.

(Continued from page 10.)

CUPRESSUS LUSITANICA (Cedar of Goa, or Portuguese Cypress).—A very elegant drooping tree, fifty feet high, grown extensively in Spain and Portugal, hence its specific name. It is not hardy enough to bear the severe cold in the northern parts of Britain, but would, very likely, be able to live in Devonshire and Cornwall near the sea.

CUPRESSUS MACROCARPA, syn. LAMBERTIANA (Large-fruited Cypress).—This is a noble tree, growing upwards of seventy feet high, with a stem nine feet in circumference. The leaves are rather broad compared with the rest of the species in this genus. They are of a bright green on the upper surface, and of a silvery, glaucous hue on the under. This peculiarity renders it a fine tree to ornament the landscape in this country, as well as a desirable species to introduce largely into the pinetum. The timber is hard and close-grained, which

quality, when the plants are cheaper, will make it valuable as a forest tree, especially as it has proved to be perfectly hardy. Mr. Hartweg found it in California, and says it forms one of the noblest trees in that country, and when fully grown bears a strong likeness to the majestic Cedar of Lebanon. We strongly recommend this beautiful species to the lovers of Coniferae. The price is moderate; good plants, two feet high, may be had for 2s 6d each. There is a variety named *fastigiata*, a closer-growing and more upright tree, equally hardy, but more rare.

CUPRESSUS MAJESTICA (Majestic Cypress).—A tree well-named, if we may judge from the growing appearance of the young trees we have in this country. Very little is known about it; even its native country and origin are unknown. It is very rare.

CUPRESSUS THURIFERA (Frankincense-bearing Cypress).—A perfectly hardy, fast-growing tree, native of Mexico; in that country it often reaches one hundred feet high. The habit is different to the generality of Cypresses, being thin of branches, and small-leaved, yet it forms a fine tree. We have seen specimens of it about fifteen feet high, quite upright, and very handsome. Though a native of Mexico, it bears our climate well, growing in any soil not actually wet.

CUPRESSUS THYOIDES (White Cedar, or Thuja-like Cypress). This common tree has been separated from the Cypresses by Spach, a writer in a French work on botany, as, we think, quite unnecessarily, and, therefore, we have retained it under the genus where Linnæus placed it. It is, as is well known, a beautiful tree, growing upright, and thickly clothed with branches and foliage, so much so, that no object can be seen through it. This renders it useful to hide any unpleasant, low building, or other unsightly object. It delights in moist soil in America, its native country, but will thrive with us in deep loamy or sandy soil. The wood is fine in grain, soft, and light, and easy to work, and will bear without warping great extremes of drought and wet, hence it is highly valued in the western hemisphere. In this country it seldom reaches more than thirty feet; but in the swamps of America its altitude is often from seventy to eighty feet. In the grounds at Elvaston Castle, in Derbyshire, the variety named *C. thyoides variegata* is planted in a close row to form a hedge, and a beautiful object it is. This variety, intermixed among other low-growing green Coniferae, makes a pleasing variety. There are several more varieties named—*glauca*, *nana*, *Kewensis*, and *atrovirens*—which, in large collections, are desirable enough to cultivate as objects of curiosity.

CUPRESSUS TORULOSA (Twisted Cypress).—This is an eastern species, growing in Nepaul, on the Bhoton Alps. Mr. W. Appleby, the son of the writer of this article, Curator of the Punjab Horticultural Garden there, describes this tree as being one of the finest objects in that country. The garden is situated about sixty miles from the Himalayan Mountains, the native habitat of the elegant *Cedrus deodora*. Like that handsome tree, the *C. torulosa* is hardy enough to brave our winters, at least, in the south, and is a truly beautiful and ornamental tree. Every collection ought to possess several specimens of it. It has been raised plentifully from foreign seed, and is cheaper than the *deodora*. Plants well-rooted, three feet high, may be had from 2s 6d, so that no one need be without it. As a single plant on a lawn, it rivals any other species of Coniferae in beauty. It loves a dry soil, and thrives in a high situation, if protected slightly whilst young. The timber is excellent, being close-grained, and capable of a high polish, rivaling in value the wood of the *deodora*. As the plants are so reasonable in price, and the timber so valuable, it is worthy of the attention of planters on a large scale, especially on the high waste lands of Ire-

land and the southern counties of England. If our large landed proprietors were to plant largely this species, *Cedrus deodara*, and other new and valuable cone-bearing trees, nurserymen would import seeds more largely, and sell them still cheaper, to meet the demand. Our grand-children would then see quite a new feature in the landscape of the country, as well as be in possession of greater variety of valuable and useful timber.

CUPRESSUS UHDEANA (Mr. Uhde's Cypress).—A native of Mexico, where it grows to sixty feet high. Very unlike the rest of the genus in appearance, growing very fast, but not quite hardy enough to bear the open air. It is, however, a desirable, handsome plant for a conservatory or a crystal palace, like the one now erecting at Sydenham.

†. APFLEBY.

(To be continued.)

NOTES ON THE CABBAGE TRIBE.

It would, no doubt, be somewhat interesting, were we able to trace the history of many of our most useful fruits and vegetables, from the period when they first afforded our fore elders that scanty meal which the backwood Indians are at the present day obtaining from natural productions, and which may hereafter assume a widely different appearance, when subjected to the skilful-directed cultivation of centuries yet to come. But whether the wild fruits of the unexplored forest, or that "herbage on which so many of the human race have been accustomed to look for sustenance, be ever destined to become the parents of families that may compete in usefulness with our corn, rice, fruits, and vegetables," as already known to us, is a problem to which the boldest of us cannot venture on a solution. Be that as it may, there is no doubt but many natural products might be so far improved by cultivation, as to increase their usefulness to the wretched inhabitants of those countries where civilization has not yet introduced anything better; but whether the restless enterprise of the "white man," will direct itself to the improvement of those native products, or be content with driving them before him (as he has been accustomed to do the "natives" themselves), and supply their places with things he has been taught to look upon as forming all that is useful in life, is more than any one can now venture an opinion upon, as it is a notorious fact, that notwithstanding the spread of civilization, and the increased comforts, which, as a nation, have been gradually pouring in upon us during the last three centuries, the number of plants from which these necessities or luxuries have been obtained has received very little addition the whole of that time. If vegetables be more plentiful in England in the nineteenth century than in the sixteenth, it is only, or nearly so, that the same kinds are more extensively cultivated now than formerly. Discovery has added but little to our stock, and cultivation has been more directed to the improvement of what we have, than in searching for new objects of a useful kind to work upon. Now, though I do not disagree with those who so laudably endeavour to carry on improvement to the highest possible standard, yet I think we ought not entirely to forget new objects, and those who struggle, however ineffectually, to render them serviceable to our use, are entitled to our warmest thanks; as, notwithstanding the tardy progress they may make, if the object they have in view be a deserving one, success will sooner or later crown their efforts. It may be true, that certain lawgivers will pretend to hem in the field of improvement, by pointing out how far it is possible to go, but even their lines of demarkation are so remote, so ideal, and so often over-

come, that no real benefit can be had by attending to them. Amongst other "fixed laws," it is "laid down," that cultivation weakens the constitution of a plant:—renders it less able to endure the rigours of winter, and prevents its living to so great an age. To the former of these restrictions, might we ask, how does it happen that those valuable stone-fruits of ours ripen so well, and stand our winters, when they are natives of a warmer and more sunny clime? The limited period at which a variety will continue to be profitable, is, however, certainly a proof that cultivation has here extended its favours at the sacrifice of the producer's existence; but this is more than compensated by their increased usefulness, so that it has been laid down as a rarely deviating law, that whatever tends to an early development, has a like influence in hastening to an ultimate end. Fruit-trees that become fruitful at an early age are rarely long lived, and the same with other things. Now, this law, as well as its various ramifications, has been taken advantage of by those who have studied our garden politics, so that they have been able, every now and then, to "report progress," in the shape of a production differing in some respects from the materials they had obtained it from. That this is daily accomplished, is manifested from the many varieties of fruits and vegetables we now have offered to our use, though it cannot be said that all are improvements, neither are they always different from those which preceded them; but that mighty judge, the public, soon discards what is spurious or indifferent, so that only the best is at all patronised, after a trial has been made.

In taking this cursory view of what cultivation has done, and is doing, in the way of changing the constitution or habits of some of our most useful vegetables, I have done it for the purpose of calling attention to one of the most important in the class—the *Cauliflower*. This delicate member of the large Cabbagewort family would seem to have had a common origin with the cabbage, and other species, but by a series of patient "breeding-in-and-in," the old characters would seem to have been overcome, and while the Cabbage, as one branch of the family, has been coaxed to conform to our wishes, by presenting us with a mass of its foliage folded in beautiful order into a globular or conical-shaped parcel, the Cauliflower has been directed to take another turn, and taught to form its embryo flower-buds into that close compact form, which we term "a good head." Other variations of the uses of this all-important family might be adduced, but the above is sufficient to prove the wide range which cultivation is capable of taking, and the consequent results. Now, though they may possibly both claim a common parentage, yet there is a considerable difference in their hardihood—the cabbage standing unscathed where its kinsman would have perished. That this difference is brought about by the cultivation of the latter being directed to the most delicate part of the plant, is certainly the cause of this want of hardihood; but be that as it may, the difference in the two, amounts to something like three or four degrees of latitude, or more; other conditions being the same. By this it will be seen that Cauliflowers ought to exist or stand the winter in the south of England, without any more protection than is necessary for cabbage plants in the north of the kingdom; and though there is often a little more difference still, yet the principle is correct. But the two productions are essential at the same place, consequently, the more tender one must be protected through the inclemency of our winters, while the more robust, being left to brave the storm, may, nevertheless, endure its rigours with less injury than its sheltered kinsman. Cauliflowers are, however, ticklish things to deal with, and some other conditions must be complied with, to ensure a successful result; but the subject is one so fraught with

importance, that I find the subject of wintering them must be postponed for another week; in the mean time, let our less experienced friends take care not to nurse these plants into that tender state which makes them as susceptible of cold as if they had been denizens of the greenhouse. A sturdy, healthy growth can only be ensured by continued exposure, and let them be only covered up when the weather threatens to become very severe. But more of this anon. J. ROSSON.

THE WIDOW INDEED!

By the Authoress of "My Flowers," &c.

It is remarkable to observe how unwilling people are to trust in God. If our own hearts did not teach us this, we should be quite ready to say the whole world is beside itself, for having such large and full promises given to it, and yet refusing to receive them. And so it is; it is mad, and guilty too; but we are all in the same condemnation. There is scarcely one among us who would dare to rest upon one of God's promises if it went against the promise of the world.

I know, however, one old woman who has dared to do so. She has acted upon, as well as talked about, trust in God; and though she "was young, and now is old," she has not found the "promise" fail.

Old Betty is a widow of above fourscore years: she is, in fact, eighty-nine. She was quite a young woman when her husband died, and left her with two daughters and a son; but he left her with the "promise," also, and he could not have done better for her. A man who had had an affection for Betty in her youth came forward, in due time, and wished to make her his wife. She had no objection to him in himself, but she loved the "promise" better; and chose to abide "under the shadow of the Almighty," who had seen fit to take her earthly prop away. Two or three times Betty was urged by this old admirer to change her mind and marry him, but nothing could move her. She said she was not "afraid" but the Lord would provide her a bit of bread, and take care of her children too—and a widow resolutely she remained.

Her eldest daughter married, and died young. The younger became a cripple, from rheumatic gout, and lay for years and years cramped and agonized on a little bed in the corner of the kitchen, with her hands and feet twisted almost into balls, and suffering the most acute pain. She died soon after we first knew the little household, but I can still hear the bitter cry of "Moth-the-r, moth-the-r," which the poor sufferer constantly uttered, as she lay in unspeakable torture. Poor Betty waited upon her by night and by day; she was a tender mother, and did all she could to soften the trial of this poor afflicted creature, but nothing could ease the pains, until the Lord stretched forth His hand and took her.

Betty's son was a "waif and stray." He was wild and worthless in every one's opinion but hers. He was transported after the Riots of 1830; and, excepting two letters that came soon after his going away, she has heard nothing of him. Whether he died, or forgot her, she cannot tell. His term of transportation has long since ended, but he neither comes or writes; and Betty weeps bitter tears over his loss, and her own uncertainty.

The "promise" has never failed poor old Betty through all her trials. When Naomi was left desolate, a daughter-in-law clave to her, and cherished her; in Betty's bereavement a son-in-law became to her as her own, and clave to her with the fond affection of a daughter. He never left Betty's roof from the hour his wife died. He never dreamed of marrying again; he had no child, and Betty was thenceforward his only care. When all her children were swept away, George stood in the gap; he laboured for her, he comforted her; he was a man of few words, but of many deeds, and he cheered and supported her desolate widowhood.

Betty was enabled to turn a penny honestly, by selling a little gingerbread, and a few apples and potatoes in their season. There is always something to be seen still in her window of that kind, although, in these days, she finds

pennies are few among her humble customers. A daily walking carrier from the town has for many years spent his mid-day hours in her cottage, for which he pays a trifle, so that Betty has added her mite to her son-in-law's labours to pay their rent and live. Cleaner or more honest creatures than the widow and her devoted son-in-law the pariah never produced. George worked for years on a neighbouring nobleman's estate, and not a word was ever spoken against him. Those who knew him could trust him, where none else could be trusted; and he was so civil, so harmless, and so humble, that every one liked and respected him.

But, alas! this comfort has been disturbed in the good and wise providence of God. The aged widow now dwells alone in her little cottage. Her second prop has been taken away, and she rests singly on Him who says "Let thy widows trust in me."

It was a bitter parting. Poor George had been a great sufferer at times for many years, but his last illness was very severe, although he seemed better, and Betty had no idea of his end approaching. He called her up one night in a great hurry, but had nothing to say when she went to him. He was odd in his manner, but still she was not alarmed, and when he wished for a cup of tea, she went down stairs to make a fire, little supposing that on her return she should find him dead. But it was so. The kind eyes were closed, the active arms were still, the voice that was always welcome to her was silent, and poor Betty found herself again a childless widow.

The poor old woman still clings to the "promise," and as she relates the short and simple story of her life, she blesses God for his goodness in never having left her to want. Her mouth has been filled, although with homely fare, bread has been the chief part of her diet, with the weakest liquid that could be called tea, and what causes her heart greatly to rejoice is, that she has never been in debt. She pays to the uttermost farthing every thing she owes, and while a shilling remains owing at the shop she is restless and uneasy.

Her prospects on earth are now somewhat dark. Her rent is high; the carrier's health failing, which would cut off one little means of help, and the failure of potatoes in her little bit of allotment grounds, depriving her of that principal support. But her friends, who love and respect her, take no rent for her ground, and she cheerfully says "The Lord will keep me;" and has no excessive dread of the Union, should it please God to bring her to that end. But as yet she holds quietly on her way. She does all her little household work; washes her own clothes; rises at five as usual; and "muddles about" as she says, all day long. It is affecting to see her sometimes looking over all poor George's working tools, which she hopes to sell—a little story belongs to almost all of them; and she seems to see him again seated by the fireside as she spreads them out before her. She is now unable to reach the church, but a lady goes every Sunday morning to read a portion of Scripture, and a simple sermon to her in her little dwelling; and she loves to listen to the Word of Life more and more, now that all other things are passing away. She has a good hope through grace—she has tasted the Word, and found Him "faithful that promised;"—"bread" has been given to her—"water" has been "sure" to her—she has wanted "no good thing." Young and old have died around her—the changes and chances of this mortal life have happened to rich and poor, but old Betty stands like an aged oak, with a twig or two still green, just where she stood more than forty years ago; her head is strongly bent, but her eye is bright, her actions vigorous, and her affections warm and strong. She is now asking anxiously after a young midshipman, who is on his homeward voyage, who has grown up before her eyes, eaten her gingerbread, and waved his sea-cap twice to his old friend, as she stood weeping at her door to see him depart to his ship. Her son is lost to her, but she loves the sons of others; and there are some whose first visit, on returning home, is paid to poor old Betty.

There is no fear for those who are "widows indeed," who trust in God, and continue in supplications and prayers night and day. They have a treasure-house, and a key that unlocks it; they have a God, and a way of access to him; they have a promise, and a faithful Promiser. No man can meddle with their promise "or their peace. The Word of the Lord hath said "Let thy widows trust in me." "Heaven

and earth shall pass away," but God's "Word shall not pass away." Let the example of poor old Betty encourage all widows to trust in God.

COTTAGE GARDEN, AND WHAT SHOULD BE THE NOVEMBER CROP.

BREADTH, 27½ YARDS; LENGTH, 44 YARDS.

East hedge.

Alley and Raspberry border, 6 feet.

Cabbage tribe succeeded by next spring and summer's mixed crops.

	feet.
Two rows of prickly spinach	4
Alley	1
Three rows of spring brocoli (Knight's Protecting)	9
Alley	1
Three rows [Apple tree] of early spring cabbage	6
Alley	1
Four rows of Scotch kale	12
Alley	1
Two rows of savoys	1
Alley	1

Potato division (autumn-planted).

Sixteen rows of potatoes, at 30 inches apart

40

Apple tree.

Succession winter division following the mixed crops, and become occupied with the roots next season.

A flying crop of lettuce succeeded the two rows of spring cabbage, and the row of ash-leaved kidneys, now in their turn succeeded by a trench of parsnips

A ridge of turnips (swedes) -

Alley

Two rows of transplanted swedes, or sown turnips

3

Alley

1

One row of [Apple tree] savoys (strong and early planted)

2

Alley

1

Two rows of autumn cabbage

2

Alley

1

Two celery trenches (growing between them a row of cabbage, savoy, or stone turnips)

14

Two rows of strawberries (growing between them white and black Spanish radishes)

7

Alley (or a row of potato onions)

1

Walk, 4 feet.

HONEY SEASON IN NORTHUMBERLAND.

The honey season being over, and the last hives brought from the moors, in accordance with the wishes of some of the correspondents of THE COTTAGE GARDENER, I will

communicate the result of the harvest in Northumberland. The season, though I must call it critical, has been an average good one. The months of July in the gardens, and August on the moors, were very productive, but then many hives had received so severe a check from the miserably cold and rainy weather in June, that they were not in a condition to profit by the succeeding fine weather.

It may not be unacceptable to describe the plan I have pursued, in a locality where the honey season is short, and which has answered so well, that I always intend to adopt it. My hives are Mr. Golding's "Grecian," which I am pleased to see are pronounced by "A. Country Curate," the "ne plus ultra" of hives. Preferring, as a matter of taste, "the time-honoured straw hive," to those of other materials, it seems to me that the extreme lightness and simplicity of these, with the facility of working them, and having the whole contents of the hive at the disposal of the operator, enables them to that distinction, while the price places them within the reach of at least a rich cottager. Following the directions in the shilling Bee-book, when the hived swarmed I cut out all the foyal cells, and returned the swarm, with its queen. No re-issue took place, and the whole strength of the hive being thus concentrated under a queen two years old, the bees stored 28 lbs. of honey in a super during July. I should add, that I have always found ventilation, and affording additional room, quite ineffectual in preventing swarming.

I am almost inclined to dissent from the sentiment of "A Country Curate," "that there is nothing new under the sun," for the destruction of drones immediately after swarming is a feature in the economy of the bee which I do not remember to have been noted by any author. Singularity must plead an excuse for a recurrent subject which may seem tedious. The early destruction of drones and drone eggs, alluded to in Nutt's book, is apparent to it as an author who would surely be a retrograde in the path of apian science, is what all bee-keepers have experienced in an ungenial season before swarming. This year it was seen in many hives, in June, but having no record not to render its occurrence immediate of swarming unparalleled? It would almost tempt me to repopulate a hive, in order to watch the effect on its future prospects. May I say, to the id of a reserve for younger queens is fanciful, those 1 ft by the old queen being hatched within at most ten or twelve days of each other, and to the last the succession to the sovereignty is doubtful, as I thus year ascertained, for in a hive which did not swarm a second time, the first hatched queen, having disposed of two others, was herself destroyed, when a week old, by one (the last) which had not been liberated from her cell more than twenty hours. Does it ever happen that a stock which has swarmed will swarm again with the young queen, of course after an interval of some weeks? But even supposing such an extreme case, the queen would lay drone eggs before making a deposit in the royal cells.

These observations occupy much valuable space in the pages of THE COTTAGE GARDENER, which, however, are lent to the extension and progress of science, as well as practice, as the latter must always be dependent on the former, it is hoped they may not be considered inappropriate.—INVESTIGATOR.

SITTING HEN'S NESTS.

A warm situation has advantages which may not always be foreseen, and the following instance is remarkable, showing how long eggs may be left uncovered without destroying their vitality. I had supplied the eggs (13), and lent a sitting hen to a neighbour, and when she had sat in a granary ten days, was shut out, through the carelessness of a servant. Being a stranger in the farm-yard, the hen was not recognised, but supposed to have strayed in from an adjoining walk, and thirty hours elapsed before it was discovered that the hen had left her nest. The farmer's wife despaired of her brood, but, to her surprise and pleasure, eight chickens were hatched. The tiled roof of the granary was fully exposed to the rays of the sun, and the temperature very high, probably above 80° during the day, and not much lower at night.—INVESTIGATOR, *Litburn Tower.*

CONFINING BEES.

It is a very singular coincidence, that the hive from which a number of drones were brought out dead, became queenless, as well as Nos. 2 and 13, of "B. B." Its history confirms the opinion of "A Country Curate," that the death of the drones was not the cause of the subsequent misfortune. The drones were brought out June 10th, and the hive swarmed on the 19th, and it is very certain that the old queen would not have left the hive unless the royal larvae had been in a satisfactory state of progress.

Piping was listened for at the usual period, but in vain. Neither was a young queen seen, and as the hive appeared weak and dispirited on the 9th July, the combs were taken up on the bars and examined. Neither queen nor brood being found, a young queen was introduced, and then the hive revived, and on the 5th of August it contained a large quantity of brood, being then sent to the moors; it is now (Sept. 14th) working vigorously in a super. This condition of these hives is not likely to have been caused by the wet and windy weather, as young queens do not leave their hive unless the weather is fine; however, it is not uncommon for a swarming stock to become queenless, and this is not surprising, when we consider the risks to which queens are exposed during their frequent excursions. Some instances of this have fallen under my observation, and perhaps some of the readers of THE COTTAGE GARDENER may be able, from their experience, to give some information on the subject, and also as to what is the immediate effect of a young queen's absence and loss; if it resembles the wild disorder (which all bee-keepers must have witnessed) which takes place when a queen dies in the hive, or is removed after she has begun to lay eggs. This is a subject of importance, to which I have given some attention, and to which I may be glad also to be glad to learn any observations that have been made on the longevity of queens, whether they have been traced more than a few years, and at what season their death usually occurs.

The enquiry of "C. R. R." has just met my eye, and I am happy to be able to answer it. In a hive to which I had returned the first swarm, by cutting away the comb, piping commenced on the 8th July, and, as is with the long note, for the earliest swarming being on as she arrives at maturity, is unable to fly, and the exuberant swarm is compelled to always piping as long as there is a plurality of young queens.

May suggest that the earthenware-pan described July 14th, will not prove a suitable habitation for bees in winter? The non-impervious quality of the surface will cause great condensation of moisture, and the combs will in consequence become mouldy, and the bees probably unhealthy. Could not these bees now be joined to No. 2, which is no doubt perfect? They might be removed by driving. If a bit of the circumference of the pan is not at hand, a bell-glass inverted over it might answer, by pasting paper over the inside, the bees would not refuse to ascend, and then the required water might be supplied from their own honey, with a few sounds of sugar. Six pounds of sugar will yield 10 lbs. of syrup, and though ale may be best water will answer to boil it in, with the addition of the rum.—INVESTIGATOR.

THE COCHIN-CHINA FOWLS REMONSTRANCE.

SIR,—I and all our tribe have had our courage worked up to the crowing point by the boastful crew of those Spanish and Dorking cocks of yours, that they and their families are more prolific, eat less food, and are altogether more valuable than we, who have filled so many pockets with the produce of our numerous golden eggs. I am deputed by the rest to deny that we are gourmands, and to say that we eat only in proportion to our size, and that if their wives produce larger eggs, they do not produce so many, nor such rich ones! One of our family was hatched in April, 1850, laid early in August, continued to lay nine out of every ten days, till Christmas, was then broody ten days, laid again in the same ratio till April, 1851, sat three weeks, was then released of her burden, laid

in ten days, and so on. Let them produce one of their family that has done more. Then look at our little ones, how easily reared, while the Spanish tribe are notorious for moping when chickens, and for dying by the dozen. And compare us in size and beauty; some of my wives weigh 9 lbs., 9½ lbs., and 10 lbs., and even 10½ lbs., and several of my brethren weighed 13 lbs., and my father was the same weight. I am glad you will allow me to crow as well as them, and that you do not thrust pieces of wood into my nostrils, to prevent my crowing, as do some of the brutes, who call themselves men, when we are on ship-board. Enjoying this privilege, as champion for our whole tribe, I challenge "Gallus" to a fair and honourable trial of our individual merits, with an equal number of each, equal food in proportion to weight and eggs, and equality in every respect. Mind! I mean true Cochins, not mulattos, quad-runs, &c., for allow me to say, I have travelled much, and lately have been invited to pay many visits to professed relations, but was sadly surprised and disappointed to find that the relationship was only this—that some gentlemen from Dorking, and other places in Surrey, had married some of my wives' cousins, and these were their children. At other places I saw the descendants of families who only came from the same place as we did. Only think of the impudence of claiming relationship! As well might every ugly cur from the Isle of Skye claim to be a Skye terrier. Pray, Sir, do what you can to prevent this for the future, or I fear these base alliances and assumptions will quite destroy our identity. While I am about it, I'll just ask you another favour. Will you try to invent a poultry exhibition man-trap, for I was once in Sturgeon's prize pen, at Birmingham, and when half asleep, and half awake, at witching time, I think you call it, I was disturbed by the introduction of a sly hand into our pen, which withdrew the eggs my wives had laid, marked them, and then did the same with some other pens; these I am told were hatched, and thus my good master's breed was abstracted without pay.

In self-defence, and conscious superiority, I crow defiant,

COCK-A-DOODLE-DO-O-O-O.

SENDING COCHIN-CHINA FOWLS TO THE SHOW.

Choosing, catching, feeding, preparing baskets, and directing them, putting in the chickens, and tying down the lids, all is bustle, and the little cart waiting at the gate. The gardener, sent the guardian of the chickens, has just won a prize for flowers. "We must stand first this time, I am; good-bye, Mrs." and away rattles the little cart, with its astonished burden. The dear little chickens, how modest, and how pretty they looked! How bright the yellow ones! How decided in their markings; and how bright, too, the partridge! And so they started on their way, to show their beauty among hundreds of the most beautiful of the eastern countries. So they started. But how did they come back? Looking well and hand-some, perhaps handsomer than ever, change of air seemed to have agreed with them; but—chickens no longer—they must lord it now; they must have establishments of their own; they can no longer rest contented, placed apart with pullets, and with cock birds respectively. When let out next morning, the pullets—I love the pullets, pretty confiding, some little creatures—contented themselves with fluttering all legs and wings across the long grass, "Hock! hock! hock! there he is," to where the companions of their recent excursion were confined within a network of wire, and when they found joining company impracticable, returned to eat their breakfast. Not so, the yellow cock. "Young Giant" he had been called before he went, when he was in the habit of being satisfied if he could get his share of the victuals, and avoid the beak of his great red brother; but "Young Pickle" is the name he has gained for himself since he came back, for he has heard of prizes (and done his part towards gaining them, too), he has become self-willed and conceited, he will no longer remain with the cocks. He can surmount, in his eagerness, the little fence which has scarcely ever been surmounted by Cochin-China before, and nothing remains but to give my lord an esta-

blishment of his own. The great red brother, "Bully," is not clever enough to get over the fence, but remains cross, moody, and discontented, on what he evidently considers the wrong side of it. Truly, one of our west country amateurs had good reason for sending his beautiful pen of six young pullets to Birmingham last year.

The poultry exhibitions which now occur so often perform their mission well, occasioning great improvement in all good breeds of fowls; but might they not be made conducive to another?—to a more general, if less interesting, end, by improving the *general stock* of poultry in the country? Let a cottagers' show be carried on conjointly with the local shows, for the encouragement of those who, at present, only want the means to compass the choice varieties. Let a prize of a cock, a cockerel and pullet, or a sitting of eggs of some *first-rate* breed be offered to the cottager who can show a pen of six common fowls in the best health and order, giving at the same time a strong recommendation that for the future, in breeding, the good sort shall be adhered to, and kept distinct. If the show should take place in winter, the eggs might be claimable early the following spring. Some persons, from not having tried the experiment, are fearful of sitting travelled eggs, but they need not be so. Some time back, Mr. Punchard sent me a table of the result of his experience in this particular, by which I find, that out of 901 eggs sent to 63 different places, after travelling distances by sea and land varying between 14 and 395 miles, 555 chickens were hatched; about eleven-eighths—no bad result. My own experience has proved even more favourable than his, and I have found that eggs which have travelled immense distances, have often produced a larger proportion of chickens than those hatched at home; only showing, perhaps, that when we give a guinea for a few eggs, we bestow more care and attention on them, and the hen in charge of them, than when we merely fetch them from our own hen-house. I am sure there are some, I have little doubt there are many amateurs, who would assist an endeavour like this, which I suggest above, by giving the prizes, if the poultry societies could manage the other arrangements, and it would surely conduce towards the result, for the accomplishment of which so many have written and laboured—general improvement in poultry throughout the country. In arranging the details of these and all other shows, the confidence of exhibitors especially, should be supported by the most exact precision respecting the prizes, which should be carefully noted according to precedence, and ties entered as such.

All portions of the country boast their poultry shows now. When will London have hers also? The exigence which still delays a thing so desirable in the eyes of most amateurs, is, I believe, a difficulty in finding some gentleman, with leisure, to undertake the management.

A show of Cochín-China fowls, and no mean one, we shall, however, shortly see in London; but a show without contrast or competition, for on the second of November, Mr. Sturgeon will sell by auction, in Baker-street, a large portion of his far-famed stock.

ANSTEE BONN.

(Acting up to the suggestion thus made, our liberal correspondent will offer a cockerel and a sitting of eggs, as a first and second prize, to be competed for by cottagers at the approaching Exhibition of *The Winchester and Southern Counties Society for the Improvement of Poultry*.—Ed. C. G.)

THE SHELDRAKE AND ITS HAUNTS.

THE first sheldrake which I ever saw, and the scene in which it made its appearance, remain firmly daguerreotypy on my memory, after the lapse of many years. It was my good fortune to be spending the winter in Scotland; and those who have never seen Scotland cannot even dream what a beautiful country it is. I was staying on the banks of that noble river, the Ness, whose entrance into the sea is marked by the town of Inverness. The Ness is remarkable for several things: among others, for magnificent salmon. Man gets his share of these fish, but the shoals of seals which haunt the mouth of the river, appropriate the greater proportion of the finny prey. One salmon for breakfast, one for dinner, and a third for supper, is a moderate allow-

ance for each individual of this tribe of seals; because, the meal ended, and his appetite satisfied, Mr. Seal does not put his cold fish, the remains of his twenty-pound salmon, into his larder, but lets it float away for the benefit of the poorer inhabitants of the waters, and amuses himself by catching a fresh one, whenever his mouth begins to water for a little snack. Many readers will ask, *why* we allow this robbery of our salmon fisheries, and *why* we do not send the seals about their business? But it is of little use arguing, *who* are the rightful owners of the fish, and *for whom* the salmon ought to be preserved—for men, or for seals. A month, on the coast of Invernesshire, will teach the stranger that it is easier to talk of dispossessing the seals, than to do it.

Salmon-fishing, by human creatures, begins there on the first of February. The more snowy and sleety the day, the better luck is expected. That day it *sneezed* beautifully, as we say in Norfolk; and I think our host caught half a dozen fine fish to his own rod, and could have captured more. I was kindly furnished with tackle, on that and many subsequent occasions. But the Ness, below the falls, is a difficult river to fish, even for adepts; and, till then, I had never thrown an artificial fly, nor seen even a live trout, much less a furious salmon, with the strength almost of a hippopotamus. To do anything in that part of the Ness, it is necessary to throw cleverly thirty yards of line, upon occasion, and to wield steadily the rod which throws it. The consequence was, that the more severely I flogged the water, the less notice would the salmon take of my flies. I sometimes fancied they put their heads out of the river on purpose to laugh at me. Then came a little temper and excitement which made matters worse. At one time, crack went the beautiful fly, of gold and silver and peacock's feathers, off the end of the line, sounding like the explosion from a French postilion's whip-lash; by-and-by, when my energies were collected for a throw which *must* get a "rise," envious shrubs in the background would detain my hook; or the rod would be smashed in two, by the violence of the misplaced effort. I would have given it up, but was good naturedly urged to continue. Other people caught their salmon; my fly never entered a fish's mouth.

The valley of the Ness is lovely at all seasons. Rocks, woods, mountains, a rushing stream, arable lands, meadows, flocks and herds, huts, wreaths of turf smoke, are a few details of the panorama. Fishing soon became, with me, a mere pretence for the admiration of nature. That winter was mild, and often furnished pictures of perfect Alpine beauty: the mountain-tops were covered with snow down to a certain altitude, and then everything was green, and bright, and cheerful, and sunshiny. One day, when I had broken my rod for the dozenth time, I cannot imagine how, and was resigned to the usual good-humoured encouragement to try again next day, I mounted a commanding shoulder of a hill, and sat down to gaze around me. Soon, a beautiful bird came sweeping up the valley from the sea, in mid air, but still beneath me, and followed the course of the river, till it disappeared in the distance. It was a sheldrake, brilliant with orange, white, and some dark glancing colours, I could not tell what. I had read in Willughby, that it was "of a mean bigness, between a goose and a duck," but it looked larger than I expected, from the bright contrast of its hues, which are as conspicuous as those of a magpie, with the addition of greater variety. Tame sheldrakes must be pinioned, or they will afford very pretty sport to your gunning neighbours; and, therefore, in all the aviaries and ornamental waters that I have since visited, no bird of the kind has ever delighted me with a performance resembling that gaudy sweeping flight up the glorious valley of the Ness. I afterwards found that the birds are not uncommon in that neighbourhood, and that they are little sought after by sportsmen. They are good for nothing to eat, and their feathers are not usually employed for artificial flies. More metallic tints are in greater request: the poor little kingfisher, not found so far north, yields its skin in England, to be imported into "the land o' cakes." Sheldrakes breed, too, along the coast, in the peculiar spots that suit them, as well as further south. A lighthouse keeper, who had served his turn in the extra solitude of Fern Island, told me that one of his summer amusements was to lay hands on the little sheldrakes hatched there, and to rear them for sale to the dealers in tame waterfowl.

The sheldrake is hardly patronised, as it ought to be, for the decoration of the pond in the pleasure-ground. Orange or bright bay, black or metallic bottle green, and very pure white in the plumage; with bright red bill, and feet, and legs, as Willughby says, "of a pale red or flesh-colour, the skin being so pellucid that the tract of the veins may easily be discerned through it," are not features to be seen in every ordinary farm-yard duckpond. The slight upturning of the bill at the end, gives the same pretty, pert air, as is impressed on the human countenance by a not too snub nose. Both sexes are alike in colouring, though that of the female is less decided. This character, perhaps, also shows their intermediate place between the ducks and the geese: for in the true ducks, however gay the male, the lady is in general soberly brown or russet. I once bought half a dozen sheldrake's eggs in Norfolk (where they have bred regularly on the coast) for as many shillings. They are larger than common ducks' eggs, but otherwise similar: that is, they are of the same shape, tinted with a light sea green, and having a smooth greasy substance. A hen incubated them, and brought off two sheldrakelings, informing us thereby that the little ones are quite destitute of the gay clothing which bedecks their parents. Their down is greyey-brownish-green, like that which covers the godlings of the brown China goose; but they have four lighter yellowish spots, one on each shoulder, and one on each hip, which would help you to pick them out from amongst hundreds of ducklings. After a few days, too, it was evident from their respective increase in size, that one was a little drake, and the other a duck, beginning the world. We reared them to about a month old, when they pined and died. Why? you ought to be able to guess, if you have read Yarrell, and others, on the article Sheldrake. But let us do something better than read. Let us go and visit the breeding places of the sheldrake. We shall then see why Willughby calls them "Burrow-ducks." I am rather in want of a little fresh air, and we shall study natural history after the hunter's fashion.

We are approaching the little fishing-town of Blakeney, and you already perceive a change in the scene. It is a good, great-coat colder than at home; and the air is more than transparent. It illuminates the landscape, as if there were some bright medium between it and our eyes, as there is, in truth. These hills are steeper in their declivity than those we are accustomed to: our gravelly crag would not lie at so great an angle to the horizon, but would have slipped down before it became covered with herbage. The material here is well-worn pebble-stones and coarse shingle. You may remember that hills composed of loose matters have a slope corresponding to the stuff they are made of. The ash cone on the top of Vesuvius is an example which my legs have not even yet forgotten. Different heaps of different rubbish incline according to their own private methods of slope; as would different kinds of sand in different hour-glasses.

A way-side passenger has become a rarity. The few we do meet make a point of saluting us respectfully. Yonder, crouched in the hedge, with red hands and blue face, is a boy deputed to the office here called "keeping" crows. I wonder if he be the same, to whom his employer once shouted, "Well, boy, where are you going to now?" "Why, master, I ha' kept 'em in this piece till they ha' eaten it up good tidily clean." "They ha' flown to the tother piece, and I'm now agoin', like winking, to keep 'em there." Observe, too, the cottage gardens. Their contents mark the neighbourhood of the sea. You might suspect it from the extra-bright colours of the few remaining flowers; and from the extreme luxuriance of those rosemary shrubs; but here you see, for the first time during our drive, that handsome plant, the Tree Mallow (*Lavatera arborea*), displaying flowerets not a few. Depend upon it, the "Missis" is finely proud of that ten or twelve-foot specimen. I envy it myself. Those next door are of the same species, though their foliage is so different. Before flowering, the leaves are ample, but when the plant attains its reproductive stage, they are much smaller. In either state it is ornamental, as you see; but though a British native, and even a member of the scanty Bass Rock flora, it is not generally known. Many an alien is more familiar to people who saunter in dressed grounds and trim parterres. In gardens it often remains some years without blooming, but dies in the winter after it

has flowered; for it is, or ought to be, naturally biennial. Seeds fallen in the ground from the parent mallow will keep springing up every season for a number of years: but the young plants are impatient of cold, except in maritime situations, and few survive, which may be the reason why it is so rarely seen inland. But a tolerable gardener would get over that difficulty.

At last we are arrived, and a queer-looking place it is! The town seems a *cul-de-sac*, with no thoroughfare. There is one, discoverable by the enterprising. The dull little two-storied houses, in the narrow street, stand staring full-visaged at each other, like partners in a country-dance, instead of boldly facing the wide extent of marsh, creek, sea, and sands, as you and I should place them, were we to engage one for a three-months' lodging. And, listen! A watchman's rattle! if watchmen had not been swallowed up by the police. Ah! look! It is a fish-cart from Sheringham. The "old chap," in Saxon (the "senile vendor," in Roman) English, distrusts his feeble voice to give due honour to his commodities, so, after a flourish on the rattle, "Haddocks! fresh haddocks!" is gasped forth in a faint and asthmatical cry. Oh! we are not on vulgar ground; though genteel people, dear souls! very rarely trust their precious selves to stand on the pebbly pavement over which we are passing.

"What do you want for this haddock? No. I will not give you more than threepence; if I stretch another penny, I'll have that nice 'But' into the bargain. Very well: we'll take these to B——s, to be fried for breakfast. It will be a relief to Mrs. B., who does not expect us. Tell me; dare truly genteel people carry a couple of fish into an inn-yard between finger and thumb?"

But it is still too early to pay our respects to the Nais, "and the nymphs who dance on the sands," though our jaunt has taken place at the best possible age of the moon. At Blakeney it is high water at six in the morning, three or four days after full moon and change. So, we can drop down to the sea and the extraordinary "meals," four or five miles distant by water, with the ebb-tide, and return with the flood in a conveniently-timed day. Before we need take boat there is time for a good walk. Almost every other path is under water, thanks to this pressing north wind, so we will follow the Marsh bank, itself a pleasing wonder.

D.

(To be continued.)

WILD BEES.

By H. W. Newman, Esq.

(Continued from vol. viii., page 422.)

APIS LAPIDARIA (RED, OR ORANGE-TAILED BEE).

THIS is another beautiful species of wild bee very common in England. It forms its nests sometimes in old walls, heaps of stones, &c., or in the earth, generally a couple of inches only from the surface. The female, or queen bee, is large, very black, and hairy, with the three last segments of the abdomen red, or deep orange; the male is smaller, quite differently marked, being nearly all yellow, except the abdomen, which is red; the worker is a smaller bee, and marked the same as the queen. This is a very common bee in some parts of England, and on the continent, but I never saw one of this species in any part of Scotland, though there is a variety of it differently marked, with nearly the same habit in every respect, most frequently found there in old walls; they go by a very vulgar name among the lower orders in the north.

Of these (Red-tailed) I have taken many nests. This is easily done, as they are mostly on or near the surface of the ground, but out of the reach of the tread of cattle. My method is to lay the nest bare in the course of the day, and after sunset, when they are all quiet, to go with a small box, and lift the whole of the nest, combs, bees, &c., all at once, and cover them up for the night. It will amply repay any one curious in these trifles to watch the exit of the workers in the morning, when the aperture is opened, and they find themselves in a new situation; the care with which they survey the entrance one by one, the slow and cautious manner in which they take their first few flights, is most

admirable. Surely no one who observes this can for a moment suppose that the bee finds its way to its hive, or nest, mechanically, without full observation.

The males of the *Apis Lapidaria* have precisely the same habits as the two last described species; these bees leave the nests a few days after they are hatched (guided much by weather), to become wanderers like their congeners. They voluntarily leave, and may be seen flying from thistle to thistle, in their lively liveries of yellow and red.

Three years ago, when at Weymouth, I met a gentleman and his little boy, who were amusing themselves at a nest, killing the workers of this species with a shoe; this was in September. I civilly asked him, why he killed them; his reply was, that they had some honey. The nest they had found was at the bottom of the cliff. I caught several of the workers with my naked hand, at which they were surprised. I assured them they were quite harmless, and convinced them that it was too late in the season to find the cells full; they became converts to my opinion, and desisted from destroying them. I have opened and examined hundreds of nests at the end of August, or beginning of September, and never found any honey. They appear to consume it always before the end of the summer; probably it is not wanted after the hatching is over, for as the wild bees are dormant through the winter they require none. We walked a few hundred yards together, and I caught several of the drones from the thistles, and he observed how different they were in appearance, and wondered none had gone into the nest, nor come out while we were there. I told him the reason of this, and that they never returned.

I was at Dieppe, in Normandy, in August, 1843, where I remained a day-and-a-half, on purpose to examine the wild bees in the country near. I found the same species exactly as in England. By far the majority were the Red-tailed, and the *A. Terrestris*. I met a number of French school-boys amusing themselves in the cruel practice of killing the wild bees and extracting their honey-lugs. They certainly were adepts at catching them by the back; but when they saw me take several drones in my hand, and pull them by the legs and wings, they began to think I had some magical power, and it was with difficulty I could persuade them that the drones had no stings.

There are several more species of the wild bee in Britain, varieties of those which I have described, but they have all the same habits as to the internal economy of the nest—the drones all leaving without the faculty of returning; and each of the males of all the species make a round of visits, in fine weather, in the early part of the day, to particular spots; and each species varies its flight in this respect on the ground in a manner that a little resembles the workers. I need scarcely add, that none of the honey cells of any of these bees are sealed like the hive bee. The *Apis Lapidaria* is the handsomest of its congeners.

(To be continued.)

ROOKS AND PHEASANTS.

SOME correspondents have frequently asked for advice how to establish a rookery. The reply has been, to set rook eggs under a magpie, who happens to have built in a favourable situation for a rookery. Assuming that you could get three or four pairs of magpies to build in the same spot near together, the plan would seem plausible, for a pair of rooks will seldom stay; they join other neighbouring flocks; but three or four pairs (if thus hatched and reared) would form a little community of their own, and probably might stay. But the difficulty is to get a magpie to feed a rook. I have known the experiment tried more than once, and the magpie has always deserted the rooks, and starved them, just as the black fine feathers appeared. A magpie is a most curious and sharp-sighted bird, and is not easily imposed on. Rooks, it is true, have a great attachment to the place of their nativity. Not farther back than twenty-five years ago, I remember that a pair of rooks built annually, for several years, on a single tree, in the Royal Hotel yard, and another pair on a tree in Edmund-street, both places then being, as now, in the very centre of Birmingham, but they never staid after their young could

fly. There are two rookeries near my present residence, and one is now altogether deserted in the winter, and is used in the breeding season only, I presume for the sake of the old nests, and by those birds who were bred there.

I have tried to rear young carrion-birds from their unfledged state, and they generally have lost the use of their legs when about fledged. I attribute it to a mistake in feeding, or in the food itself. If I wished to try to raise a rookery, and had a very suitable wood of trees, for they must be high, and a good many of them together, I would get some rook's-eggs, and set them under a bantam or light hen, and would try to rear the young by hand, in a place made amongst the trees, and I would turn them out as I would young pheasants or partridges, when they just began to peck; or the nests themselves might be robbed off their young when hatched, but you must recollect that you can never tame any bird or animal half so well after it has once opened its eyes upon, or been fed by its own parent, as you can by never letting it know any fostering hand besides your own; but the experiment of making a rookery is a very doubtful one.

One word to sportsmen on rearing pheasants, the result of experience. 'Do not turn up your tame or caged hens in your woods in the spring,' to be eaten by foxes and vermin, and avoid putting a tame or caged cock pheasant with your hens to spoil their eggs through incompetency. Crop the hens wings, and put them in a wired place, upon at the top, where the wild cock pheasants can have access to them. Then sit off the eggs under a hen, and rear in the usual way.

A WORCESTERSHIRE MAN.

TO CORRESPONDENTS.

. We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed 'To the Editor of the Cottage Gardener, 2, Amen Corner, Paternoster Row, London.'

PRESERVING BALSAM BY CUTTINGS (J. B.).—There is nothing new in this. The difficulty is to keep the cuttings healthy over the winter in a cool greenhouse. Place them at the warmest end, and if even then the cold should seem too much for them, put the glass over them, under which you struck them. Give little water, but keep them from flagging. A little labour, and you will be rewarded with compact bulbs, very full of flowers.

CALCEOLARIA SEED (A Subscriber).—Your greenhouse would have been quite sufficient for this. No stove heat is required. September is the best month in the year to sow, &c., but as October will be progressing before you see this, we would almost advise you to wait until February, then proceed as follows:—Fill a pot or pots half full with drainage, then with sweet soil, somewhat rough, to within three-quarters-of-an-inch of the top, then fill with half-an-inch more of fine-sifted soil—if a little peat in it all the better—press it down, and then set the pot over heat, for ten minutes, in a pail of water; take it out and let it drain for at least twenty-four hours; then place the smallest quantity of fine sandy soil on the surface, press it gently and evenly down, and on this sow the seeds very thinly; then scatter over them a film of dry fine sand, and press again. Put a square of glass over the pot; on this glass place a little damp moss, and set it in a shady part of the greenhouse; remove the moss as soon as the plants appear, and give them a high position, allowing the glass to remain until the plants are some size. They are impatient of water until they are pricked off; and to avoid watering, you will succeed better by plunging the pot into a larger one, and filling the space between with moss, which you can keep moist.

GERANEA ZERRINA (T. M. W.).—This being in bud, and looking healthy, will no doubt bloom, if you give it a temperature from 50° to 70°. We frequently have it in a glass case in summer, a greenhouse in autumn, and a plant stove the most of the winter.

FUCHSIA GROWN IN POTS ON A SINGLE STEM (E. C. S.).—You have not told us your advantages. Keep them anywhere during the winter, free from frost, and just not dry, but moist rather than wet. Then cut down in spring, if you want a bush, or merely cut-in the side-shoots, and shorten the top one if you wish a Pyramid from a single stem, and repeat when the shoots have broken a couple of inches, and grow slowly, if you want a robust habit. You may prune in a month, if you like, but we should prefer spring for getting some nice cuttings, if you wanted them. See some hints by Mr. Fish, to-day.

NIGHT-BLOWING CEREUS (Leytonensis).—This is almost as hardy as the rest of the Cacti that will stand well in a greenhouse in winter, when kept dry, and in a state of rest. In such circumstances, it would require the warmth of summer to open its blossom. As to whether *Nematanthus longipes*, *Echinanthus javanicus*, and *Bignonia insignis*, the suitable stove plants for exhibition, we must reply that we do not know the last, and are not sure we know the second; but all the *Echinanthus* are good when well grown. The *Nematanthus* we have had

in bloom for long periods, but scarcely profuse enough to be fit for an exhibition-table, but we did not give it much attention. The long flower-stalks give it a very singular appearance, when seen suspended from the branch.

TWENTY STOVE PLANTS SUITABLE FOR EXHIBITION (Ibid).—The following we think will suit you:—*Allamanda cathartica*, *Allamanda Schottii*, *Euchynanthus speciosus*, *E. longiflorus*, *E. minatus*, *Aphelandra aurantiaca*, *Begonia cinnabarina*, *B. fuchsoides*, *Cassia corymbosa*, *Chirita Moonii*, *Clerodendron fallax*, *C. splendens*, *C. Kämpferii*, *Dipladenia crassinoda*, *Franciscia confertifolia*, *F. latifolia*, *Gardenia Stanleyana*, *G. Devoniana*, *G. Fortuniana*, *Glasinia grandis*, *Hoya Bella*, *Isora coccinea superba*, *I. javanica*, *I. grandiflora*, *Medinilla speciosa*, *Rondeletia speciosa major*, *Stephanotis floribunda*. Take only one of a genus if it suits you, and add, *Cissneras*, *Glossipias*, *Achimenes*, and *Begonias*, as many as you please.

PIT FOR FORCING, PROPAGATING, &c. (B. A.).—We might make an instructive article upon the subject of your pit, ten feet wide, twenty-five feet long, and divided into two divisions, but we cannot answer your questions at large, so as to be useful to others, without a drawing. Let the following for the present suffice. 1 and 3. If your roof at the apex is either a foot higher, or the walls a foot lower, the angle of inclination will be better. 3. Depth of earth two feet. 4. Size of ventilators in front and back walls opposite each light, twelve inches by six inches; but at the front and back sashes more. These, though useful, will not be absolutely necessary, but the one opening into the hot-air chamber, and the other over the pipes at back, air may be safely admitted when it would not be proper to move the sashes. 5, 6. Four-inch pipes will not be too large to heat the tank, though three-inch would do. These cemented troughs are useful, but we have no difficulty in getting moisture, by placing open rubble over pipes, and throwing in water when necessary. 7. We would use three, instead of two-inch pipes, for top dry heat, as the water circulates languidly in two-inch pipes, and if we had them at all, we would rather have them in front, or round the house, instead of at the back, as this of itself would preclude your placing according to question 9. Peach-trees against the back-wall, which, however, would not answer so well in such circumstances as vines and cucumbers. We do not see how you are to have additional dry heat from your tile drain 8, in front, as that communicates with the open chamber over the gutter, as well as the opening in the side, 7, to admit moist air. Now, by sinking your floor, for supporting the bed, some twelve or eighteen inches nearer the gutter, and we suppose this floor to be of slate, or some analogous substance, you might still have slides in the side for moist air at will, and then shafts all round communicating with the flooring would give you dry heat at will, besides enabling you to have plenty of rough material, such as brickbats, charcoal, &c., below the bed of earth. With such contrivance, unless you wanted to force plants and melons very early, the two four-inch pipes would be sufficient, especially with a canvass covering in severe weather. 8. The boilers will be nothing too large. 10. Glass, 16-oz. will not be too strong for panes forty inches by twelve inches; but why have them so long; just think of having such a thing as a crash, and the expense and trouble of replacing them. On the whole, we do not approve of your arrangement. Your pit over the gutter or tank is six feet wide, abutting on the front-wall, leaving four feet behind, you must open your front garbets to attend to the management of whatever you have. Why not place the pit in the centre, five feet wide, with two-and-a-half feet wide paths, back and front. You would thus have the whole place at command, and find yourself quite at home in the worst day, as well as the finest. Before building, examine a most economical arrangement of a house, given by Mr. Fish, at page 337, of our second volume. That house still answers admirably, the gardener does little wonders with it. If, however, you are wedded to your present arrangement, you might have a pit eighteen inches wide, and two feet deep, placed over your pipes at the back-wall, and there you may grow vines or cucumbers, to cover the wall, and hang from the lipped roof.

HOLLYHOCKS.—A Constant Subscriber recommends: *Queen of England* (Chater and Son); delicate pink; very fine; beautiful. *Aurantiaca* (Rivers); salmon and orange; beautiful. *Obscura Suberba* (Chater and Son); silvery-shaded purple; a decided improvement upon *Obscura*. *Beautify of Hawerhill* (Chater and Son); silvery-lilac; beautifully veined. *Napoleon* (Powis); slate, edged with light; fine. *Bella Donna* (Woods); white; one of the best out. *Meteor* (Bircham); crimson; fine. *Nocturna* (Chater and Son); rosy-red; mottled and veined; fine. *Rosy Queen* (Chater); rosy-lilac. *Lady Cultum* (Chater and Son); rosy-crimson, glowing as if shot with purple; fine. *Suavissima*; creamy-white; very fine. *Abricote* (Chater and Son); colour apricot; fine shape; large size; a noble flower. *Surprise* (Chater and Son); rosy-crimson; fine. *Joan of Arc* (Parsons); silvery-lilac; very fine. *Yellow Model*, or, rather, *Prime Model* (Bircham); this is very fine.

PROLIFIC DUCKS.—Mr. Edwards, Station-Master at the Lyndhurst-Road Railway Station, Hants, has a couple of ducks of the pure white Aylesbury breed, which have laid this season the prodigious number of 261 eggs. One of them laid in daily succession 146 eggs; and she is now running about with a brood of 12 young ones. The other laid 115 altogether; and she has now her second brood, having brought up her first brood of 13 early in the summer.

NEW SYSTEM OF SWARM-MANAGEMENT.—A Country Curate says, "I have been all along puzzled to account for the rather peculiar failures of 'B. B.'s' trial of the new plan; but at last he has furnished me with some clue to the discovery of the probable cause. He had not learnt his lesson with sufficient care, when he applied himself to give my plan a trial. I have never myself stopped up a hive 'from twenty-four to thirty-six hours,' (from which a swarm had issued naturally) 'as soon as the swarms had left the hives;' nor do I remember any where to have recommended such a treatment! I have said, indeed, that it may be well to stop up such a hive for a few hours on removing it to a new stand, but I have generally left my old hives so treated quite open from the first! To stop them up, however, for such a length of time, so full too of bees as they still usually are, after the issue of a natural swarm, I should at once have deemed a most mistaken method of proceeding. It is far otherwise in the case of a stock from which an artificial swarm

has been taken. In this instance there are usually, but a very small number of bees left in the hive, the drones are mostly all in company with the swarms, and there is no royal brood to suffer. But in a stock from which a natural swarm has issued, many (perhaps most) of the drones remain. This, from the nature of the case, we might expect; not only so, there are usually many bees left, and above all, there are young royal queens, perhaps all in a state, and of an age requiring the most anxious attention. Now what follows in both instances where the old stocks are shut up for so long a space? In the one instance, where the swarm was forced out, the temperature, owing to the paucity of bees, can seldom rise, from the necessary agitation within, to any very inconvenient height; at all events there is no royal brood to suffer. In the other case, however, when the swarm issued naturally, the heat from the large population might be expected to rise to a very dangerous height, and it would be almost sure to follow that the royal bees still in the grub state would suffer from that, or from neglect. This, to me, appears to afford quite a sufficient explanation of 'B. B.'s' failure. It is the management, not the system, that is at fault here. But, moreover, I should very much question the policy of 'running honey' out of the old hives, unless in a very thriving condition. I have never advised it. No doubt, too, the failure of 'B. B.' must be put down in part to the very bad season we had almost everywhere in June. Few mid-June swarms or their parent stocks will be found to have done anything this year. I shall be obliged to 'B. B.' to give us his opinion of the value of the above remarks. I cannot shake out 'H. S. N.'s' observations. He is not particular enough in narrating his facts. For instance, is he speaking of the stock or the swarm when he says, 'I could not by any means induce them to work in the super?' 'No, 3 natural swarm' could not possibly have come out of the stock, in whose place it was put, else there would have been no such fighting as he speaks of. The 'fighting,' which he says he has seen 'more or less at all the swarms that have been put where the stock formerly stood,' must have been only in appearance. I have never observed it. It is a bad sign to see drones in September, but worse in October. If any are seen now, fumigate and plunder.

VEGETABLE MARROW, &c. (Rosconia).—It is Vegetable Marrow, and not Mallow; and is a kind of gourd. *Iris* and *Sparus* are propagated both by seeds and by offset bulbs; and both ought now to be potted or sown in pots, in good turfy peat, with a little sand, and placed in a cold pit, or on a shelf in a greenhouse; the soil to be kept moderately moist all through the winter, and free ventilation whenever the weather is mild.

BIGNONIA RADICANS (Ibid).—It requires to be close pruned like a grape vine; and, after it comes to a flowering age and strength, it is generally a free bloomer on a south wall, or inside a cool greenhouse in less favourable situations. Can any of our Irish readers tell him what is the right name of a plant there called *Melidore*?

FUCHSIA AND GERANIUMS (R. E. S.).—The Fuchsias will stand out with a slight protection from frost, and all your old Geraniums must be taken up, their green tops cut off, and the hard bottom parts and roots, after being partially dried, may be packed in a box or hamper with dry fern or hay, and put away from the frost like so many potatoes; but look at them from time to time, to see that they do not turn mouldy. Cuttings will do no good now.

LIST OF BULBS (S. N. S.).—We shall begin to analyse your bulb list immediately, and we hope between us to be of great service to many of our readers. Accept our best thanks for your share of the undertaking.

FLOWER-GARDEN PLAN (J. H. M.).—Your plan will be engraved as an example of a very useful and easy way of managing such a space. As to your *Allamanda*, with seven upright shoots, two feet high, cut four of the weakest shoots down to within two joints of the old wood, and the other three cut to one-half their length; thus pruning to be done in March, as soon as you perceive the least appearance of growth; do not give the plant much water all the winter. A good gardener would prune so weak a plant of *Allamanda* at the end of this month; keep it nearly dry all the winter, and 'set it to work' in a hot-bed by the end of February; shake away the soil from the roots on the first move of growth, trim the roots, and put it in a smaller pot, force it vigorously for three months, and give it two, if not three, shifts before the end of June, and would have it in bloom nearly by that time; that way would be most dangerous to a less experienced person.

GARDEN NEAR GLASGOW.—J. C. says: "In our garden on a south wall we have *Chionodoxa pinnatifida* (the largest I have even seen, and a perfect picture in April and May), *Aucuba arguta*, *Aloysia citrodora*, and a great variety of Tea and other Roses, all of which stand the winter without any protection. Fuchsias grow with us to an immense size. As I have noticed several inquiries in THE COTTAGE GARDENER regarding the *Noisette Rose Solferino*, I may mention that we have a plant covering a large part of the front of our house (I say our, for it is my father's, but my brother and I are the gardeners!), which has been in constant flower since the beginning of May last, and still showing buds; it was not pruned at all this spring. We have also had some very fine flowers on *Cloth of Gold*, budded on the *Crimson Boursault*. All the above are growing in a well-drained border, composed of peat, loam, and sea-sand, the former predominating. In the greenhouse, we intend growing Tea and other Roses for spring and late autumn flowering, and we purpose planting them in a border formed all round the house, instead of growing them in pots, as our time being limited would not admit of the constant attention necessary, as to waterings, &c., were they grown in the latter way. Although Roses are principally what we intend growing, yet we purpose having a selection of other suitable things, and I shall be glad if you would furnish me with a list of such things (including cypresses), as you think would be likely to stand the winter without fire-heat; and here I fancy I hear you say—But why not have a flue or brick stove, in case of severe frosts? Well, because as we are residents in town during the winter months, and leave no one who understands the matter to attend to the fire, we thought we should be less likely to have our hearts broken by trusting to Jack Frost, than by leaving fire-heat in the hands of a bungler. Don't you agree with us?" [Yes; certainly.]

GRAPE FOR A COLD GREENHOUSE (J. C.).—The *Royal Muscadine* is the best white, and the *Hambro'* the best black, for such a house as

yours, on the coast of Loch Long, beyond Glasgow. If you plant these vines, you must give up all ideas of other climbers for this house, except, perhaps, *Bignonia* or *Tecoma radicans grandiflora*, which requires the very same treatment in every respect as these hardy grape vines. We know Glasgow Green, and both sides of the Clyde below it; also some of the "bunglers," and best men in these parts; and, as very little can be done on the coast until you go down next May, you will excuse us for not giving you a list of suitable plants for summer culture until we consider "a wee." Some of our Lothian readers, who know as much of Loch Long as of Timbuctoo, will be astonished to read your account of the gardening on that part of the west coast of Scotland. It will be no surprise here, however, to hear of the sons and daughters of wealthy fathers being so much in their garden.

ROSES ON TURF (E. S. F.).—Standard roses will not do so well in groups when the roots are covered with grass as when they have an open circle or bed. A group of standard roses on grass, by the way, is one of the most frightful things that you could devise or think of for a flower-garden; something as if Her Majesty, while at Balmoral, had all the ladies of her household dressed in kilts of the royal tartan. Rather have them planted in this wise—three tall standards in the centre; five half-standards round them; and ten or a dozen strong dwarfs outside of all. These dwarfs should be worked. Plants on six-inch stems, and the grass might be laid quite close to the stems of the outside row; then, from May to November, who would know but your roses were "on grass?" All the plants or kinds of roses in a group of this kind, should be of equal strength, so as to keep up the uniformity of the whole.

FLOWER-GARDEN PLANS (Ignotus and Others).—One will appear this month, and will be followed by others in a monthly series.

HARDY FERNS (Tom Pouce).—As you intend transplanting native ferns from your own neighbourhood into your rock-work, which you are now constructing, you may begin at once, and go on with them, to the end of next March, as the weather allows. The smaller kinds you will easily remove, as their roots run near the surface; but the roots of the great, strong-growing ferns run very deep, and they must be trenched out to do much good; but if so treated, they want no balls with them. We have known scores and scores of pounds wasted in removing thick, square pieces of turf, or balls, from native fern brakes to "inoculate" parks and rough pieces in pleasure grounds, such balls carrying only the buds and leaving the roots behind. When a piece of fern land is broken-up for cultivation, the farmer will tell you that the roots of ferns are as bad to get rid of as the roots of docks, and this ought to teach us gardeners that the large, common ferns come from pieces of the roots, and so we ought to know better than plant only buds and balls.

MOSS ROSES (An Old Raven).—You must take them all up early next month, trench the ground two spits deep, mixing a good quantity of rotten dung with it if the roots are long, black, and bareless, as we expect they are, cut them back one-half, and cut in the branches quite close to the old wood, and if the old wood is long, cut one-half of the shoots to near the bottom; then replant them, and put some littery dung on the surface of the ground to mulch them, and next May, when you see the leaves coming out, begin to water them freely, and let them have some weekly to the end of July. If they come up strong, give liquid manure occasionally.

FLOWER GARDEN PLAN (W. T.).—The planting is unexceptionable, and as your Heliotropes agree with the Ageratum, there is no objection in the least against the mixture, and the centre bed is just the right place for them; but this is the only bed in your garden that is fit to be seen; the four flanking it are *dumpy*, the rest quite frightful. We have not seen the work you allude to.

COCHINS v. SPANISH.—Q. in a Corner says: "I like the spirit in which 'Gallus' writes; agree with him in general as to the excellence of Dorkings, but dissent from his conclusion *in toto*. Having kept almost every variety of fancy poultry during the last thirty years, and paid great attention to their consumption of food, always feeding them myself, I have arrived at the conclusion, that if there is any difference in proportion to size, Malays are the greatest eaters; that Cochins do not eat more than Spanish or Dorkings, in proportion to size; that they are easily satisfied, and often leave part of their allotted food; and, in opposition to Mr. Bailey, no mean authority, I find they fatten rapidly, and that the short-legged variety lay on much flesh on breast and wings. As to their excellence as a table fowl, much, I think, remains to be proved, as the price has hitherto proved a bar to a fair trial on a large scale. Allow me to say, that to sit down to a poultry-dinner, knowing that they are Cochins, and having a preconceived notion that they are *not very good*, is *not a fair trial*. Will 'Gallus' or Mr. Bailey, who so kindly comes to his rescue, allow themselves to be blindfolded, and in that state sit down to table, having slices of poultry set before them, and then say whether it is Spanish, Dorking, or Cochin, from *flavour only*? If so, I will confess myself satisfied, but not till then. Is there not in the name of Dorking a charm that would give relish to any fowl sold under that name? The only difference I could ever discover, was a flavour in some Cochins approaching that of game, which can hardly be an objection. I know of a case where a very knowing guest sat down to dine off a large Shanghai cockerel, dressed as a Turkey poul, and yet could not discover the cheat. So much for *flavour*. This, however, would go to prove that in this breed there is a little difference in flavour; but I write for information, not victory. As to *productiveness*, there is certainly no comparison between them and Spanish, as far as my experience goes; none in the use with which chicks are reared,—the Spanish being proverbially difficult to rear. The opinion of some of the oldest and best fanciers has been sought, and it fully coincides with the above. One, when reading the article about the excellence of Spanish fowls as *layers*, laughed outright, and said that they were anything but good, when compared with Cochins."

RED SPIDER (A Twelve-month Subscriber).—We take it that by "Garden Spider," you mean *Red Spider*, and if so, tobacco-smoke will not kill or drive him away; neither will your other remedy,—sulphuring the house,—affect the *Dry White Scale*, or the *Soft Mealy Bug*, if they are included in your "several other insects." Nevertheless, it is a very

good plan to turn out all plants once or twice a-year from a greenhouse, or from pits, and burn sulphur in those structures, and to keep the doors and ventilators closed for a day or two afterwards. Then, after a few hours' free admission of fresh air, the house or pit is safe enough for any plant. If you use grass as you propose, the expense of keeping it in order will be double what it is now, but your place would look much better. Circles, not more than four feet through, and ovals, eight or nine feet long, are the only shapes suitable for such strips of ground.

EDGING PLANT (Lover of Flowers).—We do not know "a hardy herbaceous perennial that will be in bloom from the 1st of June to the end of September, and not to have pink flowers."

CHINA IRIS (W. G. N.).—It is not at all a fit plant for pots, unless you were an expert gardener. Place it under a west wall, in rich light soil, and it will take care of itself, and blossom there; it is hardy enough, and wants no protection.

PEAT (Y. Z.).—How can we tell you what to put it to, unless we knew what plants you cultivate, and the nature of your soil? It is not used for Geraniums; but is especially required for Helix and American plants. Keep it under cover. *Crucifers* do not require manure, unless the ground be poor, but to be grown in a moderately rich, well-drained, light soil.

PULMONIS FLOCCOSA (Subscriber).—This is a half-hardy evergreen, and is so described in *The Cottage Gardeners' Dictionary*, if you read the description there given. To avoid numerous headings, all the half-hardy species are put together. You are there told its average height, colour of flowers, time of their being open, native country, and date of introduction. We have little more to add to such history. It is called *floccosa* on account of its woolly branches. It flowers usually from July to October. There is a drawing of it in the *Botanical Register*, t. 1300.

EQUATION OF TIME (Cockerham).—We believe it is right; we are indebted for it to the *Gardeners' Almanack*, and for that the Stationers' Company employ an astronomical authority.

ROSES PEGGED DOWN (A Recent Subscriber).—We have set our face against the plan of pegging down roses altogether, for reasons long since explained; therefore, we said nothing about it in *The Cottage Gardeners' Dictionary*. Super-phosphate of lime is good for roses, no doubt, but good old cow-dung, we think, is far better for them; but try the two, and let us hear the result.

POTATOES IN COLD, WET CLAY (M. R. P.).—Do not plant your potatoes in such a soil until February. Until then keep them buried in layers alternating with coal ashes, or sand, in a cool, dry shed. When you plant, do so in beds about four feet wide, with deep alleys between to drain them. Lime, bricklayers' rubbish, coal ashes, and tan, would be good applications to such a soil. We should plant Ash-leaved Kidneys.

SAIL-CLOTH FOR FRUIT-TREE SHELTERING (A. Z. W.—n).—You may obtain this of Messrs. T. and D. Henry, 44, Mark Lane, London.

PLANTING POTATOES (K. H., Dublin).—We regret that the gentleman who instituted the experiments is dead, but we are promised a report of their results.

LIVER-COMPLAINT IN RABBITS.—In number 205, Sept. 2nd., "Amicus" asks if any reader knows a cure for liver-complaint in rabbits? I believe it to be caused by damp, and want of fresh air, also by moist or unwholesome food. I have had rabbits killed by it, that have thriven well in an open grass-plot, till a wet week came on. I think it may be known by the rough and lean appearance of the animal, and I have cured it by keeping them clean and dry, and giving them salt in their dry food. I do not think that the rabbits often grow out so fine afterwards if they have it bad.—B. P. B.

COCHINS NOT FATTING.—I must beg to differ from "Gallus," and Mr. Bailey, respecting Cochins not fattening. My young fowls have always been exceedingly fat and delicious eating, and have been pronounced excellent by all that partook of them. Mine, however, are not, I think, the largest sort, more like what "An Old Subscriber" calls the Lovell Cochins-Chinas. So the varieties may differ in their gastronomic qualities.—B. P. B.

PICKLED SAMPHIRE (E. S. D.).—Well sprinkle your fresh-gathered samphire with salt. Cover it with spring water, and let it stand twenty-four hours; then put it into a brass pan, with another handful of salt, and cover it well with vinegar. Cover the pan close, and set it over a slow fire until green and crisp, at which moment take it off, for if allowed to get soft it will be spoiled. When cold, tie over your jar both a bladder and a leather. Samphire may also, we believe, be kept all the year in a strong brine of salt and water, throwing it into vinegar just before you wish to use it.

NAMES OF PEARS (Mr. Watson).—No. 1. Marie Louise. No. 2. Beurré d'Aremberg. No. 3. Marie Louise. No. 5. Easter Beurré, small, bad specimen. No. 6. Napoleon, ditto. No. 13. Nels d'Hiver. No. 14. Glout Morceau. No. 20. Duchesse d'Angoulême. No. 21. Nels d'Hiver.

POTATOES (E. O.).—We should grow no other Kidney Potato than the *Ash-leaved*, and no other Round Whites, than *Rylott's Flour Ball*, *For's Early Delight*, and *Hopetoun Early*.

NAMES OF PLANTS (Tyro).—*Escallonia montevidensis*, or *floribunda*, for we believe the two species are identical. It grows without shelter in the Dean of Winchester's garden, at Bishoptoke, Hants. (*Rev. R. N. E.*)—The plant found by your botanical friend in a field near Cloyne, in Ireland, is not a *Verbascum*, but *Celtis Cretica*, a half-hardy biennial native of Crete, but growing like a weed in the garden of the Warden of Winchester College. It must have escaped from some garden.

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TO ADVERTISERS.

THE COTTAGE GARDENER is supplied to about six thousand families of the Nobility, Clergy, and Gentry of the United Kingdom, to say nothing of the other parties among whom it circulates, both weekly and monthly. So large is its circulation among the superior classes, that a considerable portion of its contents have been modified gradually to meet their requirements. The classes among whom our work circulates includes those important ones, the Professional, as well as Amateur Gardeners, Country Gentlemen, and Country Clergymen, indeed few families of distinction, interested in rural affairs, are without THE COTTAGE GARDENER. There is not the slightest exaggeration in this statement, and we urge it upon Advertisers, not for the sake of our own advantage only, but because we know what our readers wish for, and that Nurserymen, Florists, and Tool Makers, more especially, will find it a remunerative medium for their advertisements. From the confidence with which our Periodical is received in the family circle, it has few equals also as a vehicle for announcements referring to Articles of Household Utility, Life Assurance, Investment Associations, and other objects of general interest.

BENNETT'S MODEL BAROMETER, at ONE GUINEA, Warranted Scientifically Accurate, and entirely free from the defects of the old Wheel Instrument. It is portable, neat, and trustworthy, and adapted for every climate and purpose. JOHN BENNETT, Watch and Clock-maker to the Royal Observatory, the Queen, the Board of Ordnance, and the Admiralty, 65, Cheapside, London.

CATALOGUES — MESSRS. LANE AND SON, Great Berkhampstead, Herts, beg to inform their Patrons that the under-mentioned Descriptive Catalogues can now be had:—

General and Supplementary Rose Catalogues, for two stamps.

Tree and Shrub, and Fruit Catalogues, for two stamps.

Indian Azaleas, Camellias, &c., for one stamp.

TWO AMATEUR GARDENERS, Local Boards of Health, and Sanitary Works.—PATENT GLASS TUBES, Iron Coated with Glass, Gutta Percha, Copalinated ditto, Patent Flexible India-Rubber Tubing, and every other Hose for Watering Gardens. The Hydraulic Ram, Fire, Garden, and every other kind of Pump, Sluice Cocks, Hydrants, High Pressure Cocks, and all other articles, to be had, Wholesale and Retail, of FREEMAN ROE, Hydraulic Engineer, 70, Strand, and Bridgefield, Wandsworth.



P.S.—Important to Farmers, &c.—F. G. begs leave to call attention to his new Water Power, which in many cases will supersede the use of the Steam Engine.

WINCHESTER AND SOUTHERN COUNTIES' SOCIETY FOR THE IMPROVEMENT OF POULTRY.—The First Annual Exhibition of Poultry will be held at the Corn Exchange, Winchester, on Wednesday the 1st of December. The Poultry must be at the Show on Tuesday, the 30th of November, by one o'clock at noon, and remain there until five o'clock on Wednesday, the 1st of December. Subscribers will be entitled to one card of admission for each five shillings they subscribe. An annual subscription of five shillings constitutes a member. Non-subscribers will be admitted on payment of sixpence. All desiring to become members are respectfully requested to forward the amount of their subscriptions to either of the Secretaries at their earliest convenience. All entries must be made (on the forms only) with the Honorary Secretaries on or before Monday the 8th day of November next. Prize Lists, Forms of Entry, and the Rules of the Association, may be had on forwarding six penny postage stamps to either of the Honorary Secretaries.

G. W. JOHNSON } Honorary Secretaries,
J. COLSON } Winchester.

HITCHIN AND HOME COUNTIES DOMESTIC POULTRY ASSOCIATION.—Open to all England.—The First Annual Exhibition of this Society will be held at Hitchin, on the 20th, 22nd, and 23rd of November, 1852, when Prizes amounting to upwards of £80 will be offered for public competition.

Hitchin is a first-class Station on the Great Northern Railway, 30 miles from London, at which Station is a Junction with the Cambridge and Eastern Counties Railway. Regulations and Prize Lists may be had on application to the Secretary, by enclosing two postage stamps. Entries for Exhibition close on the 6th of November. Admittance to the Private View on Saturday, November 20th, by a 3s. ticket (not transferable), which will be available for the three days of Exhibition. And on Monday the 22nd, or Tuesday the 23rd, 1s. each. S. GOODWIN, Secretary.

The Directors of the Great Northern and Eastern Counties Railways have agreed to run Cheap Trains on the occasion, and to give free passage to all Poultry for the Exhibition (at owner's risk), and to carry back free all that is unsold.

THE NEXT EXHIBITION of the CORNWALL POULTRY SOCIETY will be held, by permission of the Mayor, in the Corn Market, Penzance, on Monday and Tuesday, the 10th and 11th of January, 1853. Prize Lists, with the Rules of the Society, and all other information relative to the Exhibition, may be obtained on application to the Rev. W. W. WINGFIELD, or E. H. RODD, Esq., Honorary Secretaries, Penzance.

Penzance, October 11, 1852.

On the 18th November will be published, price 1s,

THE GARDENERS' ALMANACK. Edited by G. W. JOHNSON, Esq. Besides the usual contents of an Almanack, it will contain Lists of the best Florists' Flowers and Fruits, a List of the chief Florists and Nurserymen of the United Kingdom, and very copious practical instructions in all departments of Gardening, arranged alphabetically to facilitate reference.

Published by the STATIONERS' COMPANY, Ludgate-street, London.

THE COTTAGE GARDENER—ADVERTISEMENTS.

COCHIN-CHINA FOWLS.—MR.

STRAFFORD is favoured with instructions from Thomas Sturgeon, Esq., of Gray's, to Sell by Auction, at the Bazaar, King Street, Baker Street, Portman Square, London, on Tuesday, November 2nd, 1852, his Early Chickens of the present year; including several White Cockerels, and also a number of Prize and Medal Birds of 1851.

The Chickens are mostly bred from birds that at Cheltenham and at Birmingham, in 1850 and 1851, thrice beat all England, besides numberless minor victories. Only first-class birds will be offered, and none parted with before the sale.

Catalogues are now ready, and may be had upon application to Mr. STRAFFORD, 89, Guildford Street, Russell Square.

TO POULTRY FANCIERS.—

The following Stock of Poultry to be disposed of:—

Eight pairs of Aylesbury Ducks, price 15s per pair.

One White-Faced Spanish Cock, very good, but has lost the sight of one eye, 15s.

Three Spanish Cockerels, 10s each.

Four pairs of Small Double-Combed Black Bantams, 15s per pair.

Malay Cock and Two Hens, for £2.

Six Malay Cockerels, 7s 6d each.

Three Malay Cockerels, very good, 15s each.

One White Malay Cockerel, 15s.

The above young stock has been bred from very choice birds, and the older birds are on disposal to make room for rising young stock.

Address, Box 18, Dewsbury.

IMPROVEMENT IN OUR

MARKET POULTRY.—A fine young Cochin-China Cock, and basket, will be forwarded, carriage paid, to any Railway Station in England or Wales, on receipt of a Post-office Order for 15s, by Messrs. JESSOP, BROTHERS, Florists, &c., Cheltenham.

Such a present would tend to raise the standard of Market Poultry in an entire district.

Now in the Press, and will shortly be Published, Price 2s., or by Post 2s. 6d.

POWLS; a Plain and Familiar

Treatise on the Principal Breeds, their Habits, Diseases, &c., with which is reprinted the Third Edition of THE DORKING FOWL; Hints for its Management and Breeding for the Table. By JOHN BAILY, 113, Mount Street, Grosvenor Square, London.

BAILY'S REGISTERED

POULTRY and PHEASANT FOUNTAINS.—They are now in use by nearly all the principal Amateurs and Breeders of the day, and the unanimous opinion is, that they are the best preventive against disease in poultry that has yet appeared. Particulars forwarded by post on application. 14 quarts, 17s 6d; 7 quarts, 10s 6d; 3 quarts, 13s 6d.

113, Mount Street, Grosvenor Square.

LANDSCAPE GARDENING.—

Mr. THOROLD, of Thorpe Bower, near Norwich, offers his services to the Nobility and Gentry as a Landscape and Ornamental Gardener in the highest style of the art, including Decorations around a House, New Approaches from Railway Stations, &c., forming Water, Picturesque Scenery, Distant Views, correcting the efforts of Amateurs, and directing the Practical Execution of Works.

Mr. T. has no connection with Nurserymen, or any trade whatever.

HOLLOWAY'S OINTMENT

AND PILLS.—EFFICACIOUS REMEDIES FOR THE CURE OF BAD LEGS AND GENERAL DEBILITY OF THE SYSTEM. Mrs. Gibb, 51, Bailey Street, Newcastle-on-Tyne, had been a sufferer for a considerable period from dreadful ulcers in her legs, so bad that she was almost incapable of walking, consequently her health had become very much impaired. She tried many remedies without deriving any benefit, but by the recommendation of others who had been cured by Holloway's Ointment and Pills, she commenced using them, by which means her legs are soundly cured, and her health completely established. Mr. J. M. Clennell, Druggist, Newcastle, will authenticate this cure. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

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SELL FOR 10s.—Six fine Hyacinths for Glasses; Six good Hyacinths for Pots; Fifty Crocuses, four different colours; Fifty Double Snowdrops; Six Double Van Thol Tulips; Six Single Van Thol Tulips; One Dozen Double White Sweet-scented Narcissus; Six Double Jonquils; One Dozen Winter Aconites; Twenty-five fine Mixed Tulips; One Dozen beautiful Mixed Double Anemones.

The above Collection of Dutch and other Bulbs are respectfully offered by the undersigned, and which may be considered will form a lively appearance in the winter and spring, they being all early flowering.

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OF DUTCH FLOWER ROOTS.

JAMES CHARTRES and CO., beg to announce that their unrivalled collection of Hyacinths, Narcissus, Tulips, Crocus, Anemones, Ranunculus, Iris, &c. (which have invariably given such general satisfaction), is now complete, of which a Catalogue will be forwarded, on application, postage free.

N.B. Seeds, Plants, &c., of every description, may be had at this Establishment of first quality, at the lowest remunerating prices.

74, King William Street, City.

London, Sept. 22nd, 1852.

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PANY beg to offer as under:—

Corn Manure, most valuable for spring dressing, Concentrated Urate, Super-Phosphate of Lime, Nitrate of Soda, Sulphate of Ammonia, Fishery and Agricultural Salt, Gypsum, Fossil Bones, Sulphuric Acid, and every other artificial manure; also, a constant supply of English and Foreign Linseed Cake.

Peruvian Guano, guaranteed the genuine importation of Messrs. A. Gibbs and Sons, £9 10s per ton, or £9 5s in quantities of five tons or upwards. EDWARD PURSER, Secretary, 4, Bridge Street, Blackfriars.

Small 4to., fancy cover, price 6d.

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THE DUKE OF WELLINGTON. By JAMES WARD, Esq., Author of the "World in its Workshops," a "History of Gold," &c. London: Wm. S. Ouz & Co., Amen-Corner.

HARTLEY'S PATENT ROUGH PLATE GLASS.

For Ridge and Furrow Roofs, Greenhouses, Railway Stations, Engine Sheds, Mills, Market-Halls, and Public Buildings generally.

For Conservatories, Public Buildings, Manufactories, Skylights, &c. &c.				4th inch thick.	3-16th inch thick.	1/2 inch thick.
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30 inches wide and from 40 to 50 long	Or 20	50 to 70	0 6	0 8	0 10
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Under 8 by 6				0 4	0 6	0 7
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10 by 8	14 by 10	14 ft. super., if the length does not exceed 20 in.	0 5	0 7	0 9
14 by 10	14 ft. super., if the length does not exceed 20 in.	20, and not above 30 in. long	0 5 1/2	0 8	0 9
14 ft. sup.	3	or if above 20, and not above 30 in. long	.. .. .	0 6	0 8	0 10
3	4	20	.. .. .	0 6 1/2	0 8	0 10
4	5	30	.. .. .	0 7	0 9	0 11
5	6	35	.. .. .	0 7 1/2	0 9	0 10 1/2
6	8	40	.. .. .	0 8	0 10	0 11
8	10	45	.. .. .	0 8 1/2	0 10	0 11 1/2
10	12	55	.. .. .	0 9	0 11	0 12
12	15	70	.. .. .	1 0	1 1	1 2
PACKED IN BOXES OF 50 FEET EACH.						
6 ft. by 4 ft., and 6 ft. by 4 ft. 6 in.	10s 6	8 in. by 6 in., and 8 in. by 6 ft. 6 in.	13s 6			
7 " 5 " 7 ft. 5 ft.	12 0	9 " 7 " 9 ft. 7 ft.	15 0			
		10 by 8				

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THE BEST IS THE CHEAPEST.
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Also, Choice Hollyhock Seed. Packets of 200 seed, 1s 6d.

Choice Pansey Seed, fine, 1s to 2s 6d per packet.

Catalogue of the above may be had, on application, for one stamp, to CHATER and SON, Haverhill, Suffolk.

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WATER-CLOSET FOR £1.

Places in gardens converted into comfortable water-closets by the Patent Hermetically-Sealed Pan, with its self-acting water-trap valve, entirely preventing the return of cold air or effluvia. Price £1. Any carpenter can fix it in two hours. Indispensable for health in case of the cholera. Also, Patent Hermetically-sealed Inodoriferous Commodore for the sick room, price £1 4s, £2 6s, and £3. A prospectus, with engravings, forwarded by enclosing a postage stamp.

FFF and Co., 26, Tavistock Street, Covent Garden.

Recently published, price £1 11s 6d

THE ROSE GARDEN. By

WILLIAM PAUL. Embracing the History and Culture of the Rose, with full descriptions of all the leading varieties. Illustrated by 15 highly-finished coloured plates.

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OBSERVATIONS ON THE CULTIVATION OF ROSES IN POTS, including Fencing and Propagating. Second Edition.

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MORNING RAMBLES IN THE ROSE GARDENS OF HERTFORDSHIRE.

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AN HOUR WITH THE HOLLYHOCK.

N.B.—These Works have been favourably noticed by the leading Horticultural Journals. PIERCE, BROTHERS, and Co., Paternoster Row; or from the Author, Cheshunt, Herts. by post, at the prices above quoted.

WEEKLY CALENDAR.

M D	W D	OCTOBER 28—NOV. 3, 1852.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bef. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
28	Th	St. SIMON AND ST. JUDE.	30.100—29.576	54—39	S.W.	33	49 a. 6	39 a. 4	5 a. 18	15	16 7	302
29	F	Virginian Creeper leafless.	29.410—29.308	48—30	N.W.	02	51	37	5 39	16	16 11	303
30	Sa	Woodcock arrives.	29.599—29.434	49—36	N.E.	01	53	35	6 4	17	16 14	304
31	Sun	21 SUNDAY AFTER TRINITY.	29.612—29.602	49—32	N.W.	02	54	33	6 35	18	16 16	305
1	M	ALL SAINTS.	29.614—29.559	50—28	N.W.	—	56	32	7 18	19	16 18	306
2	Tu	Michaelmas Term begins.	29.550—29.536	50—31	N.	01	58	30	8 4	20	16 19	307
3	W	Lilac leafless.	29.920—29.789	45—26	W.	06	VI	28	9 4	21	16 19	308

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 54° and 39.3° respectively. The greatest heat, 67°, occurred on the 29th in 1833; and the lowest cold, 26°, on the 3rd in 1845. During the period 90 days were fine, and on 85 rain fell.

BRITISH WILD FLOWERS.

BERBERIDS.—BERBERIDACEÆ.

(Continued from page 22.)

EPIMEDIUM. BARRENWORT.

GENERIC CHARACTER.—*Calyx* below the fruit, of four small, egg-shaped, concave, spreading, deciduous leaves. *Corolla* of four egg-shaped, equal, concave, spreading petals, opposite to the calyx. *Nectaries* four, one lying upon each petal, and nearly as long, pouch-like, blunt, equal, attached underneath to the *receptacle*, by one side of the orifice. *Stamens* with filaments, awl-shaped, erect, close to the style. *Anthems* of two oblong-oval, parallel cells, attached longitudinally to the inner side of the *filament*, below its summit each cell opening by a valve, which bursts from the bottom and rolls back. *Germen* elliptic-oblong, with a furrow at the back. *Style* oblique, roundish, the length of the *stamens*. *Stigma* simple. *Pod* oblong, pointed, of one cell and two valves. *Seeds* numerous, unilobed, oblong.

EPIMEDIUM ALPINUM: Alpine Barrenwort.



Description.—It is a perennial. *Root*, creeping, slender, and thread-shaped, by which it increases rapidly. *Stems* about ten inches high, solitary, stiff, smooth, cylindric, semi-transparent, three-branched at top near the root scaly. *Leaves*; there are no leaves springing direct from the roots, but each branch bears one most elegant and delicate leaf, on a longish stalk, either once or twice subdivided into three leaflets. *Leaflets* hanging down perpendicularly, heart-shaped, ending in a point, about an inch-and-a-half long, but enlarging after the flowering is over, very veiny, saw-edged, and each tooth ended with a hair, pale-green above

and greyish beneath. From the point where the stalks of the subdivisions of the leaf join the footstalk common to them all, springs the flower-stalk, which bears a cluster of flowers about four inches long, the flowers scattered upon it widely apart, on three or four branchlets, each branchlet usually two-flowered. *Petals* four, dark-red, and contrasting strongly with the four large pale-lemon-coloured *nectaries*, which are full of honey, and very peculiar. *Stamens* short. *Anthems* with a taper point, and two lid-like valves. *Stigma* yellowish, encircled at the bottom by a red band. *Seed-vessel* a one-celled pod, with many seeds.

Places where found.—In thickets in some parts of Yorkshire and Cumberland; on Skiddaw; and near Glasgow and Edinburgh. Very rare.

Time of flowering.—May.

History.—This plant is included in the Tetrandria monogynia class and order of the Linnæan system. It is of such rare occurrence, and has only so comparatively recently been discovered in Britain, that many botanists doubt whether it is really a native of our islands. Gerarde, in his "Herbal," published in 1597, says, "This rare and strange plant was sent to me from the French king's herbarist, Robinus, dwelling in Paris, at the sign of the Black Head, in the street called *Du bout du Monde*, in English, The end of the World. This herb I planted in my garden, and in the beginning of May it came forth of the ground. Its seed came not to ripeness in my garden, by reason that it was dried away with the extreme and unaccustomed heat of the sun, which happened in the year 1590, since which time, from year to year, it bringeth seed to perfection." Johnson, in his edition of Gerarde's Herbal, published in 1636, says, "It groweth in the garden of my friend, Mr. John Milton, in Old Street, and some other gardens about town." This "Mr. John Milton" was the author of "Paradise Lost." Parkinson, in 1640, gives a very accurate description of the plant, but only mentions the mountain districts of Italy as its native place, and Ray, in 1688, says no more than, "I observed it on the Alps, not far from the town of Ponteba." Even as late as 1807, Dr. Martyn writes, that "Mr. Miller affirms that he received some plants of it which were found growing naturally in a wood in the north of England, but he was probably misinformed." Mr. Miller may, therefore, be considered its first recogniser as a native plant. It was certainly found by the Rev. T. Gisborne, in 1787, "in a very wild part of Cumberland called Carrock Fell," and by Mr. Robson, on Skiddaw, in 1795. Johnson seems to have named it Barrenwort, "not because that Dioscorides says it is barren both of flowers and seeds, but because, as some authors affirm, being drunk, it is an enemy to conception."—(Smith. Lindley. Martyn. Withering.)

A CORRESPONDENT (W. H. O.) writes to us as follows:—

"The advantages of double-glazing are numerous, and among them are included the saving of insects, the saving of the time in covering and uncovering, the gradual return of light to the plants in the morning, the gradual withdrawal of the light at night, and the longer time the plants would have the light, i.e., from earliest dawn to the latest daylight. Moreover, I think that the second glass may have the effect of correcting any fault

in the refraction of the upper glass, and thus prevent burning. I have six small lights, three feet by four feet, double-glazed, and on Saturday last there occurred a rather sharp frost; all my glasses were covered with white frost, with the exception of two places which exactly corresponded to panes which had been broken in the under glazing."

The two places on the outer glass were kept free from white frost by the rush of warm air against them

through the broken panes beneath, and affords strong evidence of the check to the escape of heat which a second glass affords. Let it not be supposed, however, that there ought to be any opening in the inner glass for the purpose of admitting warm air from the bed between the two glazings. So far is this from being desirable, that the panes of glass, both in the lower and upper glazing, should be puttied even between the laps, in order that they may be rendered as nearly as possible air-tight.

The philosophy of double-glazing shows that its power to protect from frost depends upon that tightness, for it is only air confined, or kept quiet, that is a bad conductor of heat, and air in motion carries off heat very rapidly. The most intense cold in calm weather was not a cause of suffering to Captain Parry's men, when properly clothed at the North Pole, but the same degree of cold, when the wind was high, was not endurable, although the thermometer showed there was no lower degree of temperature—the air in motion carried off the heat faster. The same principle is in operation when a wet finger is held up, to detect which way a current of air is passing, by its rendering one side of the finger colder than the other.

It is on the known fact that air is a non-conductor of heat, that double windows are employed in Russia to exclude the cold, and in the West Indies to exclude the heat. This is no anomaly, for to exclude cold is only another mode of expressing what is intended when we speak of keeping in the heat. In Russia they have to keep the room's heat from escaping into the air, and in the West Indies they have to keep the air's heat from getting into the rooms.

In double-glazing our garden frames, we have the same object in view as they have in Russia; and if the frames had double boards, or the pits double walls, as some ice-houses have, the cold could be excluded, so as to protect many more plants than at present we are able to carry through the winter without the aid of artificial heat.

Another advantage attendant upon double-glazing, besides those mentioned by our correspondent, is the prevention of "drip" within the frame, pit, or house. This is occasioned by the warm air, which contains moisture in proportion to its warmth, coming in contact with the cold glass, and there letting drop all the moisture it is not capable of holding at the lower temperature to which it was cooled by the glass. When the difference between the temperature of the glass and that of the air is great, the moisture is deposited, or let drop, in such quantity on the glass, that the moisture trickles down and forms "the drip." Now, double-glazing would prevent there ever being so great a difference between the temperature of the inner glass and the temperature of the air in the house, as to cause such a sufficient deposition of moisture as to form "the drip."

COVENT GARDEN.

SOME of our readers will be disposed to doubt the correctness of our observation, and the authority of these "city articles" of ours, when they see in Covent Garden fruits purporting to be varieties which we said two or three weeks ago were over for the season. But this is no uncommon occurrence; such modes of imposition having been practised ever since we have known the market, and, for ought we know, one which boasts of as great antiquity as that which we exposed last week in reference to the Elder berries. It may be laid down as a general rule, that whatever kind of fruit you ask for, you can have it. Jargonelles at Christmas, or even at Easter; Brown Beurrés all the year round; Ribston Pippins *passim*; and "fine Burgamys," are among the leading articles with these very accommodating traders. Our readers must, therefore, be on their guard how they receive the assurances, and place too much confidence in these individuals. It would be wrong, however, to say that there is no confidence to be placed in any of the fruiterers, for we know that there are some of them who are of the highest respectability and integrity, and who would scorn to be concerned in such practices.

FRUIT.—There is still a continued abundant supply of Apples, and at a somewhat advanced price; some sorts having made as much as 7s. 6d. per bushel. The general belief is, that Apples are a very short crop, and will, before the season is much further advanced, be less plentiful than they now are. The sorts which have been most plentiful during the week are—*Ribston Pippins*, *Blenheim Orange*, a fine apple, but, generally speaking, not so large this season as we have observed it. The *Nonesuch*, *Winter Strawberry*, and *Beauty of Kent*, are among the leading sorts, as well as a few parcels of *Emperor Alexander*. In our report of the week before last, our printer's devil, who, like all other devils, is always up to some mischief, made us say there were Golden and Winter Pearmain's in that week's supply, whereas, in "the copy," we only mentioned the Golden Winter Pearmain. The Winter Pearmain, so far from being in the market, are hardly gathered yet. This *Golden Winter Pearmain* is by some called "King of the Pippins"—a title given to it by a London nurseryman, who, either for the purpose of deceiving his customers, or with the view of retaining the sale in his own hands, applied to it this high-sounding name. Of Pears there has been an abundance, particularly of *Marie Louise*, which has now become so common as to be met with on almost every fruit-stall in the streets. The *Bishop's Thumb* is also very plentiful, and we observed one or two parcels of the very old-fashioned *Messire Jean*, which is one of those obsolete French pears that have been displaced by the new Flemish varieties. In the centre arcade were some of the finest *Duchesse d'Angoulême*s we have ever seen; more like large pear-shaped gourds than pears; they were received from Guernsey. The *Catillac*, which is a stewing pear, has also appeared during the week, but, fine as they looked, there are some others which we would very much prefer to it for that purpose. The great objection to the *Catillac*

is its grittiness, and, however well-grown they may be, this is a characteristic which they invariably possess. If any of our readers are desirous of possessing an excellent stewing or baking pear, there are none which will give them greater satisfaction than *Bellissime d'Hiver*, *Flemish Bon Chrétien*, and *Vicar of Wakefield*; of the latter there have been some very fine specimens exhibited in the market.

VEGETABLES.—These continue plentiful. CABBAGES do not vary in price from last quotations, ranging from 6d. to 1s. per dozen. CAULIFLOWERS furnish a good supply, and some are of excellent quality, which make 2s. 6d. per dozen, but inferior examples are as low as 6d. BRUSSELS SPROUTS about 1s. 6d. per half-sieve. COLEWORTS, 1s. to 2s. per dozen bunches. CARROTS, of which there are some very fine samples of the *Long Surrey* and *Altringham*, make from 2s. 6d. to 6s. per dozen bunches. TURNIPS, 1s. to 1s. 6d. per dozen bunches. ONIONS are plentiful and fine, chiefly of the *White Spanish*, or, as it is sometimes called, *Reading* sort; they make from 2d. to 4d. per bunch. SCARLET RUNNERS are freely sold at 2s. per half-sieve. ENDIVE is very fine, large, and well-blanching, of the *Green Curled* variety, and was selling at from 1s. to 1s. 6d. per score. CUCUMBERS continue plentiful, at from 2d. to 6d. and 9d. each. POTATOES are rising in price. *Fine Regents* cannot be had, well picked and free from disease, under £7 per ton.

PLANTS AND FLOWERS.—The near approach of winter has banished flowers in pots, and their place is taken by grim, cemetery-looking "greens," wherewith the Londoners may, for the next six months, adorn their halls and balconies. Of these we may enumerate nice bushy plants of *Laurustinus*, *Aucuba*, *Siberian* and *Chinese Arbor vita*, *Cotoneaster microphylla* and *buxifolia*, adorned with red berries, *Ermouth magnolia*, and *Tree Box*. The few FLOWERS there are consist of *Erica hyemalis* and *gracilis*, *Trachelium caruleum*, *Sedum Sieboldii*, *Primula sinensis*, fine, large, fringed varieties, both red and white; *Yellow Pomponé Chrysanthemum*, and *Ivy-leaved Geraniums*. CUT FLOWERS consist of *Camellias*, *Ceanothus azureus*, *Cinerarias*, *China Roses*, *Bignonia venusta*, *Verbenas*, *Clove Carnations*, *Snowberries*, *Fuchsias*, *Heliotropes*, and *Scarlet Geraniums*.—H.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

- BURY ST. EDMUNDS, Nov. 26 (*Chrysanthemum*). (Sec. G. P. Clay, Esq.)
- CALDONIAN (Inverleith Row), Edinburgh, Dec. 2.
- HAMPSHIRE, Nov. 18 (Winchester). (Sec. Rev. F. Wickham, Winchester.)
- LONDON FLORICULTURAL (Exeter Hall, Strand), Nov. 9†, 23, Dec. 14†.
- NORTH LONDON, Nov. 23, *Chrysanthemum*.
- SOUTH LONDON (ROYAL), Nov. 11†, Dec. 9†, 16.

† For seedlings only.

POULTRY SHOWS.

- BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
- BRISTOL AGRICULTURAL, December 7th, 8th, and 9th. (Sec. James Marmont.)
- CORNWALL (PENZANCE), January 10th, and 11th. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Bodd, Esq.)
- DORCHESTER, Nov. 18th. (Sec., G. J. Andrews, Esq., Dorchester.)
- HOTTON, January 13th. (Sec. H. K. Venn.)
- WINCHESTER, December 1st. (Secs. G. W. Johnson and J. Colson.)

• PINES: THEIR CULTURE.

(Continued from page 36.)

OUR readers will remember that in the preceding papers on this subject the matter was brought up to the point of structures, interior fittings, heating, ventilation, atmospheric moisture, shading, &c. Cultural matters come next, and we must begin with the *sucker*, which is the favourite mode of propagation. Space will not permit us to indulge in verbose details, neither are they needed; we may merely observe, that the sucker makes a good plant more speedily than the crowns or gills, and that it takes less room. Those who have dined at public tables in a crowded condition, and have thereby been well elbowed, will readily understand the difference between them; the crown, in consequence of its highly recurved foliage, is much given to elbowing; and were our good friend Beaton's Yuccas to produce crowns as well as suckers, ten to one he would prefer the latter, for their habits bear a great resemblance. For the information of those who do not well understand the technology of horticulture, it may be observed, that the *sucker* is a reproduction from the root, or lower portion of the stem; the *crown*, of course, surmounts the fruit, and the *gills* are little excrescences, which nature, in her sportiveness, causes to assume the character, and, indeed, possess the functions of real plants.

Now, as not every one who reads these observations can build a house at once, and plant these suckers out in soil, we will show how these suckers are cultivated in ordinary practice. Of course, they come to hand at various periods under ordinary circumstances—the greatest bulk generally when the fruit is cut. If this happen any time between October and February, many cultivators leave them on the mother plants, termed "stools," in this condition, until February. Many come to hand, however, through other periods, for some plants produce more suckers than it is expedient to have, and as these come at different periods, it is the practice with some to dibble them in the tan at the front of the pit or frame, just like a cabbage plant. Here they will speedily root, and may remain until there are enough to fill a frame, a pit, or a portion of such, or until some re-arrangement of the stock takes place, when it becomes the cultivator to work them in with his system. On these occasions they are mostly potted, and if good plants, will require seven-inch pots, well drained. They are now, of course, plunged in a bottom warmth of from 80° to 85°, and henceforth the usual routine of culture is practised. They are repotted or shifted, when full of roots, into pots a couple of sizes larger, and thence into their fruiting-pots, when under pot culture; the period of the last shift being partly regulated by the time the fruit is required. The latter may generally be expected about nine or ten months from the final shift.

Now, if any one about to commence the Hamiltonian system could lay hands on a lot of strong-rooted suckers from these seven-inch pots, they would be just the thing; they would be purchased at a moderate

price, compared with fruiting-plants. Another excellent plan would be to purchase stools as soon after the fruit is cut as possible, and to plant these out at once.

And here it is necessary to interpose a few special remarks, for the guidance of those purchasers who are not experienced in Pine-culture. The first is, to beware of insects; not to receive plants at a gift, if at all infested. We are led to these remarks in a more pointed way from the tenor of an enquiry or two recently addressed to THE COTTAGE GARDENER; the querist asking if the crowns of imported fruit would not be a good beginning for one just embarking in Pine-culture?

Certainly, such must appear very feasible and economical in the eyes of the unknowing, but it is both a dangerous and uncalled-for procedure. These crowns are for the most part three-parts killed by the ordeal they have passed; but even this is not the worst; they may be infested with scale, bug, or other insects; at least, they are to be regarded with a suspicious eye; and, moreover, they may not be of the kinds best adapted for a British palate, a British sky, or a British market. Let anyone suggest to a good gardener the introducing a lot of these blistered-looking apologies for a plant amongst his healthy, glaucous-looking Queens or Jamaicas, which, like Cæsar's wife, are above suspicion, and they will speedily see his hairs stand-on-end "like quills," &c. No; if any one feels desirous of trying an experiment in this way, let him make the attempt in some pit or house which may never compromise the general system of Pine-culture. And not only may the crowns or suckers from importations prove foul, but those from home-grown fruit also, although the latter is of somewhat rare occurrence now-a-days. An exceedingly jealous eye, must, however, be kept on them, and the best way for those who do not understand Pine-culture, is to employ some experienced gardener to select them.

In looking over Mr. Hamilton's notes, in answer to certain enquiries, we find that he strongly recommends old stools wherewith to commence his system. He says:—"Let the beginner commence with old stools, with one or more suckers on, and plant them out at once. If old stools cannot be had, let the suckers be stuck in at one end of the pit, in a compost two-thirds leaf mould, and one-third soil. After they have made one foot of growth let them be planted in fresh turf. A fourth-part of the bed would hold the suckers; when well rooted, let them be taken up and laid aside, and their compost can be spread along the bottom of the bed, and the fresh turf can be laid on the top for permanent planting, and then there is no loss of time." It will be seen here what stress Mr. H. lays on old stools, which, however, are not always attainable. It so happens, that they are the very thing that most gardeners on the old or 'pot-system throw away; the only misfortune being, that they are apt to strip away every sucker of any size previously, and in this case, several months may be lost—a most important affair.

Those about to build should immediately commence a sharp look-out, and, perhaps, the best way would be to offer nurserymen, in Pine-growing districts, a certain value per head, specifying kind, and making thorough cleanliness a *sine qua non* condition. As to time of planting, that is almost a matter of indifference. To those determined to build, we say, do so directly, and get the stools all at once, or by instalments, as you can catch them, good and clean, and at as early a period as possible, only take care that everything is ready to receive them.

It will be well here, for the sake of the tyro, to explain a few technical terms pertaining to the Pine in its various stages. Gardeners, in general, use the following to express the character of their plants:—

Small suckers.

Strong suckers.

Successions.

Strong successions.

Fruiting plants.

Fruiters.

There may be some little modification of these terms, here and there, but such, in the main, express these gardening conventionalities. Their meaning is as follows:—*Small suckers* are inferior suckers, or suckers from inferior plants, and are generally under a foot in length (this, however, is dependent on kind), and in diameter, at base, a little over an inch. *Strong suckers* may be characterised as of at least double that strength; the former, by our potting-men, would be put in a five-inch pot, the latter in a seven-inch. When established in their pots, and full of roots, they become *successions*; those in the five-inch pots, the ordinary *successions*; and those in the seven-inch, *strong successions*; providing they have been flourishing. We come now to *fruiting plants*, and these, of course, mean plants prepared to show fruit, although such is not always the case immediately. There are certain marks whereby practical men can tell almost to a certainty whether the fruit has commenced rising, and when in sight it is called "a show." The general character of the plant, just previously, becomes considerably altered; it looks more compact, the outer leaves cease to elongate, or nearly so, whilst those of the interior advance, and also multiply as they advance. The whole plant, by this time, if robust, will, if pulled by the hand, appear firm in the soil as a stout shrub. *Fruiters* are those in which the show is complete, and this title continues up to the time when they begin to change colour, when they become *ripeners*—a term which needs no description.

Having now brought up the subject to what may be termed a fair beginning, as to cultural matters, we may just suppose a house of the kind built and ready for the soil; and here we may offer an extract from Mr. Hamilton's notes on the subject of soil, and what may be termed subsoil. It was before stated that, according to Mr. Hamilton, "there must be no chamber;" this, it will be seen, saves considerable expense. His uses, however, a good depth of rubble, and thus remarks:—"Let the rubble cover the pipes three or four inches, and put three inches below, broken bricks, or boulder stones, &c." And here we may name a matter connected with the height of the building, although somewhat out of place. Mr. H. is for a very flat pitch in the roof, as most good Pine-growers are; the fact being, that in very steep roofs the sunlight is apt to be too intense in extremes of weather, and also that air moisture is much more speedily dissipated beneath such roofs—the steep roof being a more rapid transmitter of vapour in its ascent to the highest level than a flat roof; added to this, it is much more difficult to carry out the interior arrangements necessary for the Pines beneath a steep than a flat roof. Mr. H. wishes to have his Pines almost close to the roof—nearly in contact with it. He says, "The roof ought to be about three feet from the surface of the soil at front, and about four feet six inches at back." Now, any one about to plan, may just draw two perpendiculars at the desired distance, representing front and back walls, and, having adopted the proper slope for a roof, may just count his way downwards, allowing no more depth of walling than is absolutely necessary, and finally throw down a ground line at what height he pleases, which will amount to this, that he can, after planning the necessary depth of walling, build as much, or as little, above the ground level as he chooses. These things, however, are familiar to most persons; and in speaking of soil, Mr. H. says "twenty inches is deep enough." As to the character of the soil, Mr. H. prefers, where attainable, turf from an old pasture; and it will have been observed that he, in another place, speaks of

"fresh turf." If the loam, or turf, is heavy—that is to say, too adhesive, or containing too much of the clayey principle—he recommends using "a little decomposed manure, or leaf mould." In another portion of his notes he observes, "If the old pasture turf is not too retentive, I would use no manure."

Our readers must not imagine from this, that what is commonly termed a strong loam is to be held in abhorrence; but it is difficult to convey a just idea of what constitutes a loam to persons unpractised in gardening matters. THE COTTAGE GARDENER, although notorious for substituting plain English for an ambiguous style, has had, perhaps, more difficulty in rendering the matter of loam familiar to its inexperienced readers, than any other affair, in so small a compass. One thing, however, is evident, that Mr. H. is coveting the organic matter which is so abundant in old pasture soils, and which no compost prepared by hand can possibly imitate. It is not the mere quality alone, it is the mechanical texture that forms its chief feature; and whether it be a matter of capillary attraction, its conducting powers as to heat, or its long-continued permeability to atmospheric action, or whether all these are combined,—certain it is, that for many horticultural purposes we cannot find a substitute for this precious material.

For other remaining cultural matters we must refer the reader to subsequent papers, in the conclusion of which we shall doubtless have some discrepancies to reconcile, some errors to correct; and those interested in this rising taste, fancy, demand—call it what you like—will do well to watch the subject to its close.

R. ERRINGTON.

VISIT TO CLAREMONT.

I INTENDED to visit the great Rose nurseries this autumn, to see the perpetual Roses in bloom, and to hear the gossip of the day about Roses in general, but the weather turning out so wet in September must have spoiled the bloom; therefore I gave them up for the present, and went to see some good public and private gardens, and a few nurseries instead. I have often seen Claremont for the last twenty years, but not so late as this—the end of September—and I never yet left it without a string of fresh ideas. On this occasion, I found them in the midst of great improvements and alterations in the forcing ground, and busily finishing up the housing of half-hardy plants, which they grow to very large sizes, and in the summer they arrange them in pairs, singly, or in groups, in different parts of the flower-garden, and in the pleasure-ground, with the pots plunged quite out of sight in most cases; and this is a style of gardening which is carried out at Claremont better than at any other place that I am acquainted with. Indeed, all the house plants here may be said to be specimens, even to the plants from which they cut sweet-scented leaves and twigs for the nosegays, and the old and fancy Geraniums they force in the spring, for cut flowers, are all in great pots, and the plants look as if they were many years old, from their size, but in their aspect they appear as if their youth was renewed from year to year. By this system, the produce is often doubled from the same space of house or pit room, and with less risk to the plants, and less expense in looking after them.

Some of the specimens in the orchid-house are the largest in this country, and no part of Europe can boast of a pair of larger orchids than the two match plants, *Zygopetalum Mackayi*, here. I know of no place where the *Cactus*, or *Epiphyllum truncatus*, has attained such a size, as in one of the stoves or intermediate stove, grafted here on the, I believe, *Pereskia aculeata*. Here also the *Beaumontia grandiflora* flowers as abundantly as at Shrubland Park, or with our correspondent

"Devoniensis." The *Euphorbia jacquiniiflora* is also very large, some of the young shoots being from three to five feet long, and when in full bloom, what a splendid wreath the tops of two of the shoots would make, placed in this fashion—one from behind each ear, with the points or tops meeting in the centre of the forehead, and then passing each other about two inches or rather more; to these add four more tops, same size as the first two, and form the six into a star, and my word for it, you would conquer the French President himself, in one night, as sure as ever his uncle was overcome at Waterloo.

But, instead of attending to ball-rooms, we are to see how they are going to provide more room for their greenhouse specimens at Claremont. The old, long house in the forcing ground, once called the "the succulent house," and afterwards the "greenhouse," is no more, and on its site is placed a specimen house, hard upon a hundred feet long, and fourteen feet wide; a broad walk down the middle, to enable them to pass up and down with huge bushes in pots, &c., and a stage on each side, much better than a slate stage, and quite as durable, and drained on the same principle as a garden-pot; thus, a succession of brick arches run along each side, with facings or kirbs next the walk, and a little higher than the crown of the arches. Now, the spaces between the arches are filled up, first with brickbats, then with rough cinders, and a finishing coat of finely-sifted coal-ashes, the whole on both sides being quite flat and level. Provision is made for letting off the drainage from between the arches into a drain. With this kind of stage the house can be kept very dry in winter, and as wet in summer as they choose to make it, without wetting the walk at all; and see what room there is for stowage under the arches. The house is to be heated with hot water, and the same boiler will heat it, and ranges of pine and other pits close by. When the whole is finished, and well proved, I shall ask for the drawings, and some of the specifications, for our pages. All the Pines are grown and fruited here in pits, and they fruit them very extensively every year; the plants look remarkably stout and healthy, with short, thick, and broad leaves—always a sure sign of well-to-do; yet Mr. Malleon says the French beat us out-and-out in the culture of the Pine, and that they get one-fourth more weight of fruit from a given space than we do. He was in France this summer, and saw fine Pines fruiting in No. 32 pots. He told me, also, that there is as great demand there for British gardeners now, as was in England once for Scotch gardeners, but for want of a knowledge of keeping accounts in the French way, and not knowing even the rudiments of the French tongue, our young men are not qualified for the Continent. The *Grapes* have also been equally fine this season, chiefly Black Hamburgs, and Canon Hall Muscats. Some of the bunches were a foot long, and the berries particularly large and well flavoured. The vines are pruned on the spur-system, and as soon as the leaves drop off in the autumn.

The Cornelian Cherry-tree (*Cornus mascula variegata*) was in ripe fruit, trained horizontally against a south wall. I never saw this plant so treated before, nor with ripe fruit on it; the fruit is very handsome, and good to eat; it is blunt at both ends, about the size of a small plum or sloe, and of a rich deep claret colour. This kind of Cornel is, therefore, a fit subject for a conservatory-wall, where no glass or artificial heat is used; and to get rid of the kitchen-garden idea, the plant should not be trained horizontally like a pear, but in the fan manner. The flowers of *Cornus mas*, as some people call it, are of no account—yellow little starry things in clusters, but they come very early in the spring before the leaf.

In another part of this garden there is an old plant

that is hardly known among gardeners, yet it is an excellent one for a small garden; it is ten feet high, and looks just as if it was a cross seedling between an ash and a walnut, and the fruit is like a walnut, but is winged. Where the *Ailanthus glandulosa* would be too large this would be a good substitute. The name is *Pterocarya Caucasica*.

Most of the species and varieties of *Conifers* have been planted here, but the new ones are not yet of a size to attract much attention. *Deodars* twelve feet high; *Cryptomeria japonica* ten feet, and as much in diameter at the bottom; *Pinus insignis* about ten feet; fine plants of *Cunninghamia lanceolata* from twelve to fourteen feet; *Cupressus macrocarpa* eight to ten feet, and, being seedlings, grow up as straight as the Lombardy poplar; very fine examples of *Cupressus torulosa* from ten to fourteen feet.

A large plant of *Wistaria* covers 136 feet of a wall ten feet high, and one of *Chionanthus grandiflorus* eighteen feet of the same wall, and seeds freely every year; and as this is one of the most difficult of our hardy plants to increase by layers, this seed ought to be looked after wherever they ripen, as every garden, however small, ought to have one for supplying its deliciously scented flowers during the winter.

The moment I entered the garden I noticed a new flower-bed a good way off, but of what flowers it was made up, D. Beaton could not tell on the instant. It was a lucky hit by Mr. Malleon, and one that any planter can imitate, and much easier than the shot-silk bed, of which I have not seen a single instance this season that was not a complete failure. This new bed was made with the old rose-scented Geranium (*Pelargonium graveolens*), mixed with the *Verben*, *Robinson's Defiance*. It was a large circle, and the Geranium was quite thick all over the space; and very likely few other Verbenas could stand so much smothering, for I could hardly see a leaf of the *Defiance*, but the bloom was as regular and thick as if there was no Geranium in the bed, and well up above the leaves, making the deception complete a short way off. Mr. Malleon told me that the *Beauty Supreme Verben*a—a pinkish variety, as strong as *Defiance*, or nearly co—planted in the same way with *Mangles' Variegated Geranium*, is equally effective; but these variegated Geraniums, and all the more delicate sorts, were potted and housed before I called. It happens very luckily, that every one, who is fond of plants like these two Geraniums—the one for the scented leaves, and the other as the best of all the old variegated Geraniums. Instead, therefore, of planting out the Rose-scented Geraniums, as at present, in all sorts of out-of-the-way places, merely to keep it going, or about the doors, to be rubbed and sniffed at on your going in or out; a bed may be made of it, or a large basket may be legally filled with it on the open lawn; and the scarlet Verbenas will look more showy over the dark green and jagged leaves of the Rose-scented than in the more natural way, without the help of the Geranium. Now, I would advise, at once, a diligent search to be made for all the Rose-scented Geraniums that were planted out this season, so as to come in for a bed next year; we shall want plants, at any rate, for 20,000 or 25,000 of it next May, and therefore we cannot afford to lose the old plants; besides, it is ten to one if young plants struck next spring will answer so well as old ones, because the soil at Claremont is so favourable to the growth of this tribe, that they come to an enormous size by the autumn, and yet this last bed did not appear to be a leaf too strong at the very end of September. The plants, in another large bed, of *Diadematum rubescens*, a very moderate grower, were, on an average, two feet high, and some of them double that in diameter. I never saw such a sight before. I never could get it to grow above a foot at Shrubland; and at Kew, this

season, it did not even cover the ground at the beginning of October, although it was planted as thick as usual.

I saw another contrivance, a new move, which looked remarkably gay—a row of Black-eyed Susans, or *Thunbergia alata*, seventy-two feet long, from four to five feet high, and a yard through at the bottom, right out in the open air in front of some hothouses, but they were planted about four feet from the wall, and were staked just like so many Sweet Peas. They all looked as healthy and as full of flowers and seeds as ever any Sweet Peas did. There were three kinds of them mixed; but the white one—the real Black-eyed Susan of our infancy—looked the best. The wonder is that they escaped the red spider at the beginning of July, for naturally they grow much in the shade; and in-doors they do better trained up a dark, damp, back path than full in the sun. To try this experiment, get a shilling's worth of mixed seeds; sow them in any light, rich soil, quite thick, about the middle of March, or, at least, before the month is out; place the pots in a brisk cucumber bed; and when the seedlings are two inches high, top them by nipping off the very points; and as soon as fresh shoots come out they are fit for potting, when they ought to have very rich, light soil, and to be put three in a pot of three inches over, unless the crop is scanty, when one plant will be enough for a pot. Never allow them to get above six inches high while they are in heat; that is the grand secret; as, when the pots are quite full of roots, and are put into cold frames by the end of April, they will make a strong push all from the bottom, and the foundation is then laid without forcing them. By the third week in May, they will stand the open air all day, and the light to be drawn over them in cold nights. As soon as the weather is mild and settled in June, plant them out in the very richest compost you can make with very rotten dung, leaf mould, fresh turfy loam, and a kindly aspect, and allow them abundance of water as soon as they take to the soil. Any one who can grow celery will find no difficulty with these, only they must not be planted in trenches; but if a space like a celery trench was prepared for them, then filled in with good stuff, and the balls planted entire on the top, you would have them as good as they were at Claremont with half that trouble.

In the centre of the garden were four beds of mixed *Portulaccas*, and each bed would need some hundreds of plants; they must have been most gorgeous earlier in the season, for even now, after a month's rain, they were not amiss, and there was not a blank in any of the beds. Mr. Malleon told me that in some parts of France they grow them by the thousand, and they do so well, that one can hardly look at them in the middle of the day; and, in the same gardens, the *Plumbago Larpen*a is one mass of light blue all through the autumn, and the best mass plant they had from us for years.

A double crop of flowers is got here from that beautiful, dark, purplish-blue *Delphinium*, or Larkspur, called *Barlowii*, by cutting the whole plant down to the ground as soon as the flowers begin to fade in June, and, after awhile, giving some good soakings of water to the bed. The second bloom was in its prime when I called. A very large bed in one part of the garden is every year full of *Hydrangeas* in bloom, as regularly as a bed of tulips; the plants being treated as biennials struck from cuttings, and planted out to nurse the first year, and in this flower-bed the year following.

I knew, for many years, that the *Amaryllis belladonna* was better managed at Claremont than elsewhere, and I made a point of asking about it particularly on this occasion, and I found a whole row of it in front of a long row of hothouses in full bloom, and every root or

bulb in the row appeared to be exactly of the same strength, for, out of the whole, there was not a single stem an inch above or below the average height; they all stood as upright and regular as a regiment in single file, which I took to be a high compliment to the royal owner—His Majesty the King of the Belgians, to whom Dr. Herbert dedicated his large work on the *Amaryllids*. Mr. Malleson takes up all the roots every sixth year, in the month of June, divides them, and, after renewing the border with fresh earth, replants them in single line, placing the bulbs six inches below the surface, and nine inches apart, and about fourteen inches from the wall; behind them, and within three inches of the wall, he has a full row of mixed *Liliums* now in leaf, three inches high, and none of them receive any protection whatever, save that the leaves of the *Belladonna* afford. These *Liliums* are also allowed to increase and multiply for six years, then are taken up, divided, and the strongest roots put in again three inches deep, and they do as well as *Crocuses*. There was not a single gap or failure in either of the rows. Patches of both kinds are left in another border to take their chance, without being ever disturbed, as a lesson for the young gardeners to see the necessity of a regular course of culture for bulbs that would seem to most people to do well enough without any care whatever. There were other evidences in this garden of a desire to "teach the young ideas how to shoot," in cases where the requirements of the establishment did not seem to want such things.

I also saw a new plan for getting nice young flowering plants of the new *Jasminum multiflorum* for winter-flowering in small pots. This flowers in winter on the young wood made during the previous summer, and stools of it are planted out on a rich border, from which long shoots rise every year, and when the growth is nearly finished they are layered in small pots, where they soon root, and are then fit for the purpose required.

D. BEATON.

SHOWING OFF PLANTS IN ROOMS.

GROWING PLANTS IN ZINC VESSELS.

AFTER the article on floral boudoirs, to which myself and readers are indebted to the inquiries of a correspondent, some complaints have reached me, that I and others would throw cold water over the attempt to grow plants in windows and rooms, and thus deprive many of one of the sweetest pleasures that it is possible to realize. Sorry should I be that such an effect should be for a moment felt. The conservatory boudoir attached to the mansion would yield an amount of refined interest which plants in living rooms can but rarely evolve; still, the advantages of a floral boudoir may, in some measure, be realized, even in living rooms, by concentrating in one particular part all that is blooming and lovely—a measure which it is often needful and advisable to adopt, when, owing to peculiar circumstances, the proprietors will have their showy plants brought for short periods to the house to inspect them there, even though the idea should be felt, that the plants and their accompaniments are not quite in character with the elegant furniture surrounding them. To counteract this impression, I have recommended ornamental artistic pots for such situations, showing, from experience, with iron, porcelain, and china, as well as with common earthenware, burnt hard, or painted on the outside, that the popular trade error in favour of soft greasy pots was rather more than a delusion. In addition to this, it was recommended that, instead of having numbers of ornamental pots of a miniature character scattered about, it would be better to use common small pots for growing, and then to concentrate a number of these into orna-

mental vases or boxes, covered over the surface with green moss, and with a contrivance below to receive all the extra waterings, which otherwise might find its way into the room. In the case of an elegant box or basket, lined with zinc inside, this receptacle for water may be supplied in the shape of a drawer, waterproof, near the base line of the box. In vases, the lower pedestal should open for a similar purpose. It is an easy matter to make such a pedestal of wood, and with paint and sand it is as easy to make it resemble the vase, however ornamental.

Still, after all this was done, either in our own case, or that of our friends, there seemed to be something wanting to make up a sum total of agreeableness. If the flowers stood near the window, the want of a reflecting back-ground was at once felt. If they were placed farther in the room—at its centre, or near its side—not only was the want of a suitable natural back-ground felt, but the colour of the paint or papering of the room often made the plants look inferiorly different from what they did in their more appropriate homes. Now, the remedy for this would seem to be almost intuitive; very simple, indeed, when once named; and some of our clever contemporaries may have adopted various modes for counteracting the deficiency; but I confess I have seen or heard of no method so simple, and so likely to prove effective, as that practiced by Mr. Fleming, at Trentham—a place which every one fond of, or engaged in gardening, should, if possible, visit, whether his superintendence extends to a few yards or an expanse of acres; whether his views are mostly bounded by his window plants, or his mind rather delights to revel among the vexed questions of building, heating, glass-wall, &c., so characteristic of the day.

Well, in going round, close to the mansion we came on some elegant boxes, seemingly of mahogany or stained wood, with a trellis formed of rods of similar wood, fixed to one side, say the back of the box. The box itself was divided into three compartments—two small ones, one at each end, and a larger in the middle—each furnished with separate vessels, shaped like the box, and thus easily set in and removed at pleasure. In the two smaller compartments, at the ends, *Ivy* was planted, and trained over the trellis, thus furnishing a beautiful back-ground. The largest centre division was reserved for flowering-plants, turned out of pots, or grown as hereafter to be mentioned. I forget the size of the boxes, say somewhere from three to four feet long, from one to one-and-a-quarter wide, and from nine to twelve inches deep, and the trellis from three to four feet in height, to be tall enough just to reflect the beauty in rooms of such gorgeous plants in winter as *Poinsettia pulcherrima*, *Euphorbia Jacquiniflora*, &c., of which there seemed to be great abundance of fine, young, healthy plants. The size of the boxes is of less importance, as our amateur friends, when once they take the matter up, will vary the size of the boxes, and the height of the trellis, according to the plants they wish to show off. One box might thus have several trellises ready to put off and on at pleasure; and even the vegetation on the trellis might be changed, to suit the size and colour of the flowers, by keeping plants growing and trained in pots, or, better still, in vessels suited to the destined compartment. If well managed and trained previously, there would be little difficulty in fixing them to the ornamental trellis. My mind instantly reverted to many plants as suitable for this purpose, such as the *Vincet major* (the Periwinkle) for large plants, and the *Vincet minor*, in its various forms of green, white-variegated, and silver-variegated, for low-flowering plants. So far as I recollect, Mr. Fleming seemed to have used the *Ivy* exclusively, and that he had found it to stand room-treatment well, with the advantage he gave it of not exposing it too much when first bringing the boxes

out, and then giving them a good breathing-time out-of-doors.

But, as bearing not merely on this subject, but on ornamental pot-gardening, however used, Mr. Fleming mentioned a fact which is well worthy of being more generally tested—namely, that he found plants to flourish better in *zinc vessels* than in any other he had tried. He considered that, from the conjunction of the earth, water, and air, with the zinc, a galvanic action was promoted, in which the plants delighted. Now, I had frequently sown all manner of seeds, and interred nearly all kinds of half-hardy cuttings into worn-out zinc evaporating pans, flat, and also with round bottoms, and though the things did well enough, I never noticed anything particular about them—in fact, I never made any note on the subject at all. As “seeing is believing,” Mr. Fleming took us to see plants so growing; among others, he pointed out oblong boxes, with two or three Poinsettias growing in them, just of the size to fit into the ornamental boxes, with attached trellis above referred to; and certainly, in contrasting them with their neighbours in pots—and those in pots enjoying individually rather more room and soil, and every other circumstance in common—if there was a shade of difference where all were healthy, the zinc-potted plants had a deeper, blacker green in the foliage. Now, the above fact is one that many a man might have got gold by in the ancient days of exclusiveness. Whatever may be made of it by the trade, and we sober-sided, stand-still practicals, as our more theoretical-progression friends at times call us, it opens up a fine idea for the amateur of refined and artistic tastes. I cannot say how long zinc will last when used for such purposes, as certain waters are apt to corrode it: but, at any rate, it is not so liable to injury as either pots or china vases; it is light, thin, easily moved therefore, and easily inserted inside of other vessels, and requires but little ingenuity in the workman to bend and twist it into all manner of classic and artistic shapes; and as it is cheap, and may be coloured at will, it may thus be instrumental, either as smaller or larger-sized vessels, for banishing the red earth pots from the windows of our cottage *ornées*. In opposition to the maxim, that “prices rise with the demand,” I believe, in this and many other instances, that prices would be moderate in proportion to the numbers of the article wanted. A beginning here may soon lead to greater improvements in our utensils for plant culture.

R. FISHER.

TALL LOBELIAS.

(Concluded from page 45.)

In my last paper on these plants I described the mode of raising them by seed. The next head is raising them *by slips or cuttings*, and it is a fortunate circumstance that they are easy to propagate that way, so that any one possessing two or three plants may soon have quite a stock.

The time for this operation is in autumn, just before the plants go out of flower. Frequently they will produce on the flower-stems short leafy shoots—these make the very best cuttings. Also the flower-stem itself may be cut into short lengths, that is, with two buds or joints. The lower joint should have the leaf cut off, and the upper one should have the leaf belonging to it preserved. The pots for these cuttings should be well drained, and filled with rich light soil, well pressed down, with a thin covering of fine silver-sand on the surface. Whilst the cuttings are being gathered and made, give the pots so filled a gentle watering, which will settle the sand, and make it firm by the time the cuttings are ready. With a smooth stick, about as thick as a good quill, plant the cuttings round the pots close to

the edge, turning the leaves so that they may point inwards; they may then be set closer together without interfering with each other. Press the cuttings firmly to the pot side, and fill up the holes with a little more sand, then give a gentle watering, and place them in a gentle heat, or, where there is such a convenience, in a regular propagating house. They will root in a shady part of a greenhouse, but not so certainly or quickly. As soon as they form roots they should be potted off into three-inch pots, and be allowed to remain in heat for a fortnight or three weeks; then place them near the glass in the greenhouse, till they have filled the pots with roots, when they may be allowed to go to rest, but should be kept just moist enough to prevent them losing their roots through the winter. If well managed, about the month of March they will begin to grow again, and will form fine plants for flowering that year.

By Division.—Where room is scarce, and the kinds plentiful, this mode of increase is the least trouble. As soon as they have done flowering, cut down the flower-stems and take up out of the bed or border a number of plants; reduce the ball of earth, and pot them into as small pots as the plants can be got into without crushing. Place them either in a greenhouse or a cold frame, well protected from frost; give water about once a month in case they should be very dry, or if they have been grown in pots, as soon as the bloom is over, cut down the flower-stems, and place them in the same situation through winter. When the warm days of spring arrive, several shoots will be seen springing round the centre of the plants. As soon as that is perceived they may be divided at once. Take a pot in that condition, turn the plants out of it, and shake a large portion of the soil away; then with a sharp knife divide the shoots from each other, preserving some roots to each division, and one or two young shoots; pot them into as small pots as they can be got into without crowding the roots. Place them near the front glass of a good greenhouse, or in a frame kept close and warm till the plants begin to grow, then give plenty of air, and a fresh potting as soon as they have filled the pots with roots.

This is the conclusion of my remarks on propagating these fine flowers. I find I have incidentally included under this head that of *wintering the plants*, and in consequence need not repeat it, but commence now with

The Soil.—To grow these plants well in pot is an important point in culture. When *Lobelia fulgens* was first introduced, a very clever gardener, now no more, a Mr. Hedges, gardener to the Earl of Mansfield, at Caen Wood, was very successful in growing and blooming them. The soil in which he cultivated them was a very rich one, consisting of loam, peat, and well-rotted cow dung. This grew the plants very strong with plenty of foliage, but not so much bloom as we require now-a-days. The soil that I have found to answer best is turfy-loam, peat, and leaf mould, in equal parts. This gives a sufficiently strong growth, and the plants flower more abundantly. To sustain and bring out the bloom, I give, as soon as the flower-stems have decidedly appeared, a weak solution of manure-water every third time they require moisture.

General management and preparing for Exhibition.—The general management consists in re-potting several times during the earlier months of the year. This causes the plants to continue growing strong for the time, and enables them to throw up several strong flowering-stems to each.

Watering.—The Lobelia is a water-loving plant, and therefore, to grow it well water should be given liberally. When the plants have received their last shift into the blooming-pots, nine inches in diameter, and these pots are filled with roots, it will be found advisable to place pans under each pot, to catch the water that passes through the pots, but it must be allowed to dry up sometimes.

The place to grow them should either be a deep pit or on the stage of a greenhouse. To prevent accidents, it is desirable to place a small stick, painted green, to each flower-stem, tying them rather slackly with soft matting. These sticks may remain till the plants arrive at the place of exhibition, when they should all be removed, excepting the centre one. The stems should be strong enough to keep their position. Each stem should bear a long spike of flowers, seven or eight of which should be in bloom at the time; each bloom should consist of petals that are broad and highly-coloured, whether the colour is scarlet, purple, or blue. The best number, or at least a sufficient number for a stand, will be six. That number will include all the best varieties at present known, but if a greater variety is raised, the number may be raised.

Lastly, *Hybridizing*, in order to improve the varieties. This is done in the usual way, that is, by cutting away all the anthers from one flower before the pollen cases burst, and applying the pollen from some other variety, possessing qualities desirable to add to those possessed by the one to bear seed. The flowers thus hybridized should be protected from bees and other insects by a covering of fine net muslin.

T. APPLEY.

• JOTTINGS BY THE WAY.

(Continued from page 44.)

In the course of my journey I visited the ancient town of *Coventry*, famous for the somewhat apocryphal history of the Lady Godiva and Peeping Tom. There happened to be an *Exhibition of Plants, Fruits, and Vegetables* that day, and I was much gratified to see so many good things on the tables. The gardener at Lord Leigh's, of Stoneleigh Abbey, had good well-bloomed plants of *Allamanda cathartica*, *Stephanotis floribunda*, *Pleroma elegans*, and others. The fruit was also respectable, and the vegetables excellent. It is delightful to observe, at country exhibitions, the very excellent vegetables produced by cottagers: it was especially so to myself, having been so long connected with a work partly devoted to their instruction; and I do not know a more acceptable and useful present to an industrious, hard-working cottager than the first two volumes of *THE COTTAGE GARDENER*.

On the same day, I had a great treat in visiting the gardens at *Keasley House*, three miles from Coventry, belonging to the Rev. Mr. Thickens. Mr. Craddock is the gardener. There I saw a noble specimen of the beautiful fir the *Picea Welbiana*, a handsome tree with all the branches symmetrically arranged, and not one in the least injured by frost. I may venture to say this is the finest specimen in England. It was full sixteen feet high, and ten feet through. It is planted on the lawn in front of the house, which stands on a considerable elevation. The garden is sheltered on the north and west sides. The subsoil is a kind of shaly rock, with a thick coating of good loam upon it. These circumstances, no doubt, were favourable to the growth of such Conifers as are rather tender, like the one I am describing. There was also a thriving specimen of that fine tree, the *Abies Douglasii*, twenty feet high and twelve feet through. This specimen was also perfect;—not a branch was wanting to destroy its symmetry. *Abies Menziesii* had reached twenty feet high and ten feet through. The lowest tier of branches reached to the ground, and were regularly disposed up to the last produced tier, forming a truly unique, handsome specimen. *Cupressus macrocarpa*, or *Lambertiana*, was twelve feet high, and a fine, well-clothed-with-branches specimen. There were also thriving trees of *Cryptomeria japonica*, *Cedrus Deodara*, eighteen feet high; *Araucaria imbricata*, and a very green tree of *Araucaria Cunninghamii*, perfectly healthy;

besides many others, more common and of less note, belonging to this tribe. In another part of the grounds I observed a good healthy tree of *Benthamia fragifera*. I was informed that this tree had not as yet fruited. On the rock-work, which is rather extensive, there was a good collection of British Ferns; and in the garden where the glass-houses are, I observed good plants of Heaths and New Holland plants. The place altogether is not very extensive, but is kept in excellent order throughout. I am sure any lover of rare and beautiful, healthy Conifers, as well as other plants, would be as much pleased as I was to view so many unique specimens in so small a place. It is a beautiful drive from Coventry, which is the nearest point by railway to it.

The neighbourhood of Coventry abounds with gentlemen's seats, which are well worthy of spending two or three days in seeing them, especially *Stoneleigh Abbey*, about four miles from Coventry. This place, with respect to gardening, is undergoing considerable alteration. Mr. Nesfield has laid out, in his peculiar style, a new terrace garden, and a large new conservatory is just finished, but not filled with plants, at least it was not when I was there. The present owner seems to be a very kindly-hearted man. The day I visited the place he had a large number of poor children at the hall, and was giving them a feast. Never did I see a happier or merrier group of children; the lord and lady were quite as happy, and as harmlessly merry as the youngurchins they were entertaining. It was, we understood, the second birth-day of the young heir that occasioned the holiday. It is such kindness that endears our aristocracy to their dependants. May such kind-hearted nobles increase to render the poor happy and contented.

The kitchen gardens are extensive, and also improving. In one new house I noted a large number of vines in pots to be fruited therein; they were almost as strong as those on the rafters; the wood was ripening beautifully, and they will, no doubt, bear a plentiful crop next year. A span-roofed lofty vinery had been at one end replanted, and the vines were growing strongly. This kind of vinery is rather common, but I know none that shows off the vine so beautifully.

On the road to Stoneleigh Abbey is *Styvechale Hall*, the seat of G. Gregory, Esq. The gardens here are improving much under the fostering care of Mr. John Ashton; and a little distance off is *Whitley Abbey*, belonging to the Hon. Mrs. Hood. This is a very ancient place. I was much pleased with the rock-work here, which is not artificial; the natural rock has been bared to a great extent, and planted with deep rock shrubs and herbaceous plants, and is the most unique thing of the kind I have seen.

T. APPLEY

(To be continued.)

WINTERING CAULIFLOWER PLANTS.

It is generally admitted that the production of early Cauliflowers, in conjunction with that of Peas, forms the line of demarcation between the winter and the summer products, which in each the garden may be expected to furnish; and it seldom happens that the Cauliflower, under ordinary circumstances, can be brought into bearing immediately the last Brocoli of the season goes out, an interval of a few days (certainly not more than a week) occurs before this important vegetable takes its place. Now, though it is well known that Brocoli (or Cauliflower either) will keep a few days hung up in a cool place, if not too much stripped of leaves, yet it is always advisable to arrange the planting and other conditions, so that the succession may be such as to dispense with the "preservation system" as much as possible, more especially so at a period when vegetation is so much on the alert as to act in an inverse ratio with

the keeping qualities of the article in question; now, in order to have Cauliflowers as early in the summer as possible, means must be taken to forward their growth in such a manner as to ensure their arriving at maturity in the shortest possible time, as in the case of many other things, the attempt to accomplish this sometimes leads to an opposite extreme. The rearing of plants too early in autumn causes them to attain a sort of matured growth sooner than they ought to do, and the consequence is, they present us with their premature heads long before they have attained that size which is requisite for their usefulness. This is what is called "buttoning," and is just exactly what the skilful cultivator tries to avoid. Now, though we have occasionally had such mishaps, and every one who tries to have his produce early must expect some of the plants to run thus prematurely to head, yet the fewer of such useless productions the better, and the only way to prevent its happening, is not to sow too soon, while to delay that duty too long is attended with risks from another quarter;—the young plants, unable to stand the rigour of winter, either perish, or if they live, cannot possibly come in early; but as all this has been explained, I will suppose that a seed-bed, well furnished with robust plants, is just waiting to be planted out.

A well sheltered border facing the full south, but defended on all other sides, should be dug and manured, adding as much mortar-rubbish as can be had, to expel the slugs and other enemies that may be lurking there. This ground must then be measured off in such a way as to give space for the tops of the hand-lights being taken off, and still afford room to walk through and examine them as required. The common sized square hand-light will hold nine plants, which, after planting, may be covered up a few days to assist them in forming roots, and otherwise establishing themselves; after which they may be gradually uncovered, so as finally to inure them to the cold air, when the thermometer is not too much below the freezing point. A mild, dull season, encouraging an unhealthy growth, is at variance with the plant's preservation when severe weather does set in: fortunately it often happens that very sharp frosts are preceded by more or less of cold chilly weather, which hardens the plant so that it endures the frost with less injury than if a severe frost suddenly followed an open mild season.

Though there are various modes of obtaining early Cauliflowers, this old-fashioned one may still be regarded as the best; but another way is to have a quantity of plants potted, which being partly protected and partly forced, are planted out in March, on some well-prepared situation, as under a south wall; yet it does not always happen that such are the earliest after all, and when the extra trouble is taken into account, the odds lie certainly on the side of planting under hand-lights; or, if they be wanting, a common frame may be placed in such a situation, and filled with plants, which, being treated exactly the same as the above, may be thinned in spring, and the residue left to grow where standing.

It very often happens that both frames and hand-lights are required to protect the necessary number of plants that are wanted in spring; and, in fact, if frames be not wanted for anything else, it is better to appropriate them to this purpose than allow them to remain idle. Now, in addition to the above modes, many temporary ones are made use of with equal success. A bed is made and surrounded "with rough slabs," sticks are hooped over it, and a few longitudinal ones being added, mats or other covering are thrown on in hard weather, and with this purpose in view the size and shape of the bed is made in accordance with its covering. In a mild winter, and in the south of England, they will but seldom want covering up; but, in more bleak districts, this will be more wanted: in the latter case, a greater

breadth ought to be planted under glass, if possible; and, in very severe weather, that will be the better for a little covering up, if snow does not affect that purpose.

In the general management of plants in positions as above, it is to be understood that a robust growth is to be encouraged, rather than a delicate, tender one. A little frost ought never to hurt them, which it assuredly would, were they nursed in a temperature more suited for geraniums; in the latter case, the elongated leaves, and the general development of the plant at a period at variance with the state of things out-of-doors, renders it very unfit to withstand any amount of hardship. Nothing is better to harden this, or any other description of half-hardy plant, than the cold drying winds we sometimes have in autumn and winter; the chilling effects of this suspends all growth that may be active, and by contracting or sealing-up those pores, which, in a more excited state, rendered the plant liable "to catch cold," by every cold draught, inures it to that condition in which its constitutional hardihood is put to a fair, yet not severe, test. When hard weather really does set in, it is better to open the frames or hand-lights a little, to allow the damp atmosphere to evaporate. Let us suppose a clear sunny afternoon in December, or January, which we know often betokens a sharp frost; on such an occasion, let the plants be very much exposed, and when shut in, both they and the ground they occupy will be less charged with moisture than previously; and if, even a little crispy stiffness from frost has caught hold of them, they are no worse, providing they have been properly inured to cold previously; with this care they may be covered up for several days, if a succession of severe weather forbids their being opened; as by being partly chilled, or shall we say "benumbed"? the active powers of vegetation, as well as of decay, are very much checked: the latter being hardly less important than the former. Care, of course, must be taken in re-opening them to the currents of cold air, but the dull weather that usually follows the "breaking up of a storm" facilitates that; everything being done in the mean time to gradually accustom them again to full exposure. By attending to these simple rules, the amateur will be able to carry his plants through the winter with that degree of robust health which is the only safeguard to a successful issue.

J. ROUSON.

ALLOTMENT FARMING.—NOVEMBER.

At last we are arrived at that part of the year when the vegetable kingdom, for the most part, sinks into a state of repose—a not less wondrous provision of Almighty God than that cheering activity and exuberance exhibited in the garden and the field during the spring and summer. By this annual repose, the exhausted soil is enabled to lay in a store of the necessary gases, or qualities derived from the atmosphere; a great proportion of the insect tribes, which otherwise would accumulate in a most destructive degree, are destroyed; and, in addition, the earnest cultivator is enabled to carry out improvements connected with the staple of the soil without loss of time in regard of cropping. To the latter point we would direct especial attention. We never saw a plot of ground yet but that something might be done, or it still in the dormant season—something to increase its value and efficiency; and as long as we have the pleasure of conducting out-door operations of this kind, we shall aim at no lower a standard than annually making the land worth more than it was in the preceding year. This may seem a bold standard to assume, but we are persuaded that in the majority of cases it is attainable.

Amongst the most solid and lasting improvements, draining may be pointed to; without this, all other appliances are but a waste of property. By it, where soils are sour, both organic and inorganic matters are brought into play that would otherwise remain inactive; the cultivator is

enabled to deepen his soil—a most important matter at all times, as affording continuous nourishment to the roots of crops during protracted droughts; and, in addition, the labourer is enabled to work his soil with half the trouble.

But one of the most important features connected with draining remains to be pointed to—we mean the increase of ground warmth. Our labouring friends, who are more familiar with the spade than the pen, may think this a trifle, and may stare when we tell them, that not only the gardeners' pine-apples and cucumbers require a bottom-heat, but that it is beneficial in a high degree to most of our ordinary crops. To say that a given plot of ground, five degrees of warmth in advance of an adjoining plot of equal extent and quality, will produce earlier vegetables, is to affirm what needs little consideration; but we go a step farther, and affirm that it will produce more abundantly. Providence has so ordained it, that the ground heat over most of the habitable parts of the globe is some two or three degrees higher than the air heat, taking the averages; so that means taken to increase the ground warmth are not so artificial a proceeding as would at first sight appear.

Next to draining, we regard the improvement of the staple the most important matter, and one, of necessity, facilitated by the former. However, we would not rest content with that amelioration which proceeds as a mere consequence, but carry matters farther. It only requires to appropriate a little of the beer-shop money and time to such matters; not that we suppose, by any means, that many of our readers in humble life are in the habit of thus squandering their time, although we do know that such characters are to be found in all countries; long may they form the exception.

* We have not space here to go into details of advice concerning "staple improvements," but may merely point to the fact, that lime-rubbish, and cinder ashes, burnt moor soil, and such like, are well-known improvers of the staple of clays; and that marls, burnt clay, ditch or pond scourings, peaty soils, &c., are of much benefit to burning sands; and lime, strange to say, has been found to benefit both.

We must now proceed to examine the position of the allotment or cottage garden, and its crops, stores, &c. And first,

POTATOES.—This has been a grievous year as to this invaluable root: great have been the complaints, and, we are sorry to say, great the losses. Nevertheless, so great is the breadth planted, that we are assured the country will be pretty well supplied after all. It appears that the potato has, in these days, a double ordeal to undergo; the first, when the "plague spot" first overruns the whole system of the plant, quite perverting its juices; the other, when the tubers are removed, and, as is too much the case, permitted to ferment, by being placed in a considerable body. These are crises in the character of the potato of latter days which deserve a little study. As to the former, all seem alike at fault; a cure is out of the question; preventives are the chief consideration. No man in his senses can doubt—however much or little it can be made to bear on the disease question—that well-preserved seed must lead to better results, in some form, than neglected or abused seed. We will at once take this for granted, and then the question is: how to preserve seed well? Common sense teaches the veriest clown, that when a potato has sprouted, part of the virtue or energy is exhausted; and that in a state of nature this process takes place in the soil; the conditions almost diametrically opposite. The former, or artificial, condition of the tuber being one exposed, perhaps, to a high amount of perspiration or fermentation, and to a capricious medium; the latter to darkness, and a sort of quiescent state. We merely throw out these observations to set our allotment-men thinking during the long winter evenings; and we advise them to persevere, and not doubt but that the potato will one day be restored to them in its original purity, however long the ordeal may be through which it has to pass.

STONE-ROOTS.—We come here to the general principles of store-root preservation, which are few indeed, and exceedingly simple. These are the points—

Dryness.

Exclusion of air.

Absence of fermentation

A low temperature.

As to the first, they can hardly be too dry, if the dryness is accompanied by a very low temperature; if we could select or lay down a pitch, we should say 35° to 40°. Exclusion of air is but another term for darkness, which is, indeed, an essential; and, in general, what promotes the one accomplishes the other. Exclusion from the air prevents loss by perspiration; and darkness prevents a tax on the growing tendencies of the crowns of such roots as Mangold, the Swede, Potatoes, Carrots, Parsnips, &c. Fermentation, caused by placing roots in too great heaps, robs them of a considerable amount of both their nutritious and keeping properties: this is the very bane of many proceedings. A low temperature is another important affair. *Rest is the maxim* with all these things; to this end northern aspects must be sought, and other local advantages, taking care that a high and dry situation be selected. No lodgment of water must ever be thought of where roots are stored. Thus much about roots in the lump; we have not space for detail. We may, however, observe, that it is well with all store-roots to cut the crown somewhat "into the quick;" the growing principle is thereby crippled for a longer period, and, indeed, weakened. Mangold should be immediately got in, the roots scraped with a piece of stick cut to an edge, and housed dry, if possible; if there is no room in any outhouse, they may be piled, in a dry state, on a piece of high and dry ground, and simply covered nine inches with soil, taking care to sharpen the exterior to a ridge, to throw off rains. Swedes may remain on the ground for another month, for they are very hardy; and, as the Mangold tops are now in use for the pig, &c., the Swede tops may thus be made to succeed them. Parsnips may remain where grown all the winter, unless needed off-hand. Our practice for many years has been to trim off the leaves in the early part of November, and immediately to manure the ground for the succeeding crop; then to open a trench a good depth at one end of the row, and thus provide for trenching them out as wanted, at the same time ridging the soil ready for the succeeding crop. Land, thus treated, is in fine order the following March for any crop of importance. Carrots will, of course, be stored, as they are tender; we cut their tops completely to the quick—a plan named twenty years since in London's Magazine, and which we have practised ever since; it assuredly keeps the roots fresh much longer, and no injury has ever arisen from the practice.

CABBAGE-WORTS.—We long since explained that this broad term was intended to express all those greens, whether Cabbage or not, which are in these days worked into the general cropping economy—some preferring one kind, some another. If we were in a position to grant allotment land to the industrious, we should assuredly take all the lawful means in our power to persuade or to coax our tenantry to secure a sprinkling of these over all portions of the land occupied by summer crops. We are led to these remarks by observing, in a late northern trip, some of the finest soil "that ever a crow flew over," as our Cheshire peasants have it, lying totally idle for the winter, after a crop of rotten potatoes, and this, too, land bringing some three to five pounds per acre. This is really a pity; the time is not far distant when every pole of English land will require to be kept in high cultivation most of the year, in order to keep pace with a stretching population, hungry as the famous Egyptian locusts. Well, all Cabbage-worts will bring to hand half-decayed leaves, which are useful to the swine, at least; and, as these are removed, advantage may be taken to cultivate between them, both for the sake of the existing crop and its successor. What is termed "soiling-up," although condemned by some, is, according to our experience, quite the thing; it prevents the plants wind-waving; it destroys a crop of weeds; it admits air to the soil; and it does more, it causes the plants to root up the stem, thereby rendering them more profitable.

RIDDING.—This was pointed to before; but as a good tale is none the worse for being twice told, we beg again to refer to it. Our advice, then, is, let every yard of land, on which no crops are standing in the end of November, be deep dug, and thrown into sharp ridges.

ONIONS.—Keep your Onions dry; yes, warm if you will, sooner than permit any damp to lodge about them. *Leeks*, if growing, as they should be in drills, should be soiled up like celery some dry day.

RHUBARB.—Those who want this early, with small expense, should cover the crowns with any dry litter as soon as the leaves can be stripped away, which will generally be in the first week of November. "An empty house is better than a bad tenant." And so with such things. Jack Frost had better be kept at a respectful distance.

CABBAGE PLANTS.—Let all those in seed-beds, not required this autumn, be immediately "pricked out" in store-beds, three inches apart. Ours are already done, the soil dressed well with the covering from charred heaps, in order to ensure a clean and healthy plant, which it assuredly will.

ORDER.—This is a strange title to finish with; but let everything be in its place, and walks and ditches cleared by the middle of the month. As far as our experience goes, order is closely related to thrift. R. EARINGTON.

THE APIARIAN'S CALENDAR.—NOVEMBER.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide."

THE requirements of the apiary are but few during the present month, provided that feeding has been well attended to in the last; should it, however, have been neglected, no time must be lost in setting about it before cold weather sets in, which may now reasonably be expected.

FLOOR-BOARDS.—It will be well to clean the floor-boards, and (the season for robbing being pretty well over, and the wasps having now finished their maraudings), to have a final examination of all the stocks, securing them well against wet, and making them up, by feeding, to eighteen or twenty pounds each.

REMOVING SUPERS.—All super as well as nadir hives should now be removed, reducing the room occupied by each stock as much as possible.

VENTILATION.—In hives of wood I have always found it necessary, during the winter months, to withdraw one of the slides at the top of the hive, and place over the opening a feeder, or small glass, for the purpose of carrying off the condensed vapour, which would otherwise run down the sides of the hive, and cause dampness and mouldiness to the combs, and sometimes the entire destruction of the stock. Mr. Taylor gives a drawing of a condenser for this purpose in his *Bee-Keeper's Manual*, page 142, fourth edition, which I have found to be very useful, where a feeding-pan could not well be placed.

NORTH ASPECT.—The accounts that I continue to receive from persons, who, at my suggestion, have thus placed their bees, are, hitherto, all in favour of it. The advantages arising from it during the late hot weather have certainly been very great, but we must catch it through another spring before it can be generally recommended.

DIVIDING HIVE FOR OBTAINING ARTIFICIAL SWARMS.—I have just received the following letter from my friend, Mr. Taylor, author of *The Bee-Keeper's Manual*, and as it contains much interesting matter on this and other subjects, I will give it at length, for I feel assured the writer will excuse my making use of it.

"I hope you will be able to preserve the dividing hive* through the winter, that we may see what becomes of it next season; so far as we have gone, we know the principle is right, and that the thing will work; though I am somewhat in the same sceptical position as to artificial swarms as are Dr. Bevan and Mr. Golding; of course, I mean as a general rule, for they are sometimes, doubtless, desirable, and it is well to have the means of accomplishing the business, which I think my hive does, without much risk, trouble, or disturbance. There are, however, other uses I have in store for it, as I mentioned to you, of equal, and, perhaps, greater importance than swarm making. Both Dr. Dunbar and Miner, speak of dividing hives, but I followed my own devices in making the one you have. The one alluded to by Dunbar, is, doubtless, that of Feburier, whose work he translated, though it was not published. Dr. Bevan told me a Welchman once brought him one of these

* I have had one of these hives, which was kindly sent me by Mr. Taylor, at work since June, and find that it acts perfectly, so far as taking to pieces goes, which may be done at any time, with very little trouble, and still less annoyance to the bees. This hive is so constructed, that I have no hesitation in saying that an artificial swarm may be obtained from it at pleasure during the months of May and June.

dividing hives to inspect, as an original invention, and, perhaps, it was even so, although it appeared an exact copy from Feburier's drawings. These I never saw, and am rather curious to know how far we agree. I should always be inclined to caution in accusing any one of plagiarism as to invention, or as to an original idea, particularly where bees are concerned, for hundreds and thousands of heads and hands have been at work on their behalf for centuries. I could name some instances in my own case. You will recollect when I told you, some years ago, I had been scheming to find out a mode and utensil suitable for feeding at the top instead of the bottom of a hive; I had never heard of such a procedure previously; but you had been in possession of a top-feeder for forty years; and, moreover, when Dr. Bevan's second edition came out, there was the very same thing, or nearly so. And so it was as regards feeding with barley-sugar, which the good Doctor recollected to have been used by a friend many years ago, without further thinking of it. By-the-by, if you want to defend the passage into a hive against an invasion by wasps, you have but to put a bit of barley-sugar across the mouth, and out will come such a body of bees that no enemy will face them. Repeat the dose as fast as they eat up their fortification, and the wasps will sheer off in despair. The idea came to me from Dr. Bevan. I once read an account of a new invention, by some one, for obviating the evil of damp in hives, in winter, by condensation, precisely the same as had been published by me for years. And yet, afterwards, I discovered that a friend had used the similar means two years before me, with success. So you see how often people hit upon the same ideas. I could mention other things; such, for instance, as a method communicated to me lately (as a secret), for washing a hive with salt and water previously to hiving a swarm into it—a practice I recollect in a district in Norfolk half-a-century ago. I saw it tried in two cases forty years since; in one instance with success, and failure in the other. Can it be right to insure a damp hive always in wet weather? Even THE COTTAGE GARDENER of the 16th of September furnishes something like an example of a similar nature, where fumigating a hive from the top is alluded to, as if it were something new. All my editions, I think, mention it; but at pages 104 and 124, third edition, and page 128, fourth edition, it is described. Whether I was the first to think of it, I do not know; but I have often practised the thing (particularly down the ventilators in Nutt's hives), though, in general, common hives do not offer the necessary facilities. The requisite tube is a bent one, which, if you were a smoker instead of a driver, I would send you. I am inclined to agree rather with Dr. Dunbar, who is a mighty champion for smoke, in many operations on bees. However, we all have our own fancies in such matters, and, perhaps, it is as well each to practice what he best understands and succeeds in. I ought to have said, that the instrument I always have used is what is called the Oxford tube, a moveable one, as opposed to the lamp form, which seems only adapted, as I conceive, to bottom-fumigating. Even for that I like the other best, as more easily regulated.

"And now you will like to hear how the Observatory hive goes on, in which, as I told you, the bees had from the first been working, exposed to the full glare of day-light. Of course, work is pretty well over; but there is a fair store of honey. I never lost sight of the queen during an inspection of half-an-hour yesterday; she is become sluggish and inactive, and not an egg proceeded from her, though a while back she laid them incessantly, to mere waste. I think I told you she was a young lady; but I have since found that the swarm was a prime one, and her appearance confirms it. Her extreme fertility had almost made me a convert to the doctrine of young queens as the best breeders, which, you know, I had many doubts about. My own observations would seem to lead me to the belief that a queen bee does not arrive at her full powers at first. Dr. Bevan spoke decidedly on this point in a letter, which I think you saw. For myself, I have observed that an early second swarm, and a late first one, coming at about the same time, and not much differing as to size, did not prosper as well relatively as might be expected, one queen being young and the other old; the latter, in short, increasing the population the soonest and the most. It might not be so always,

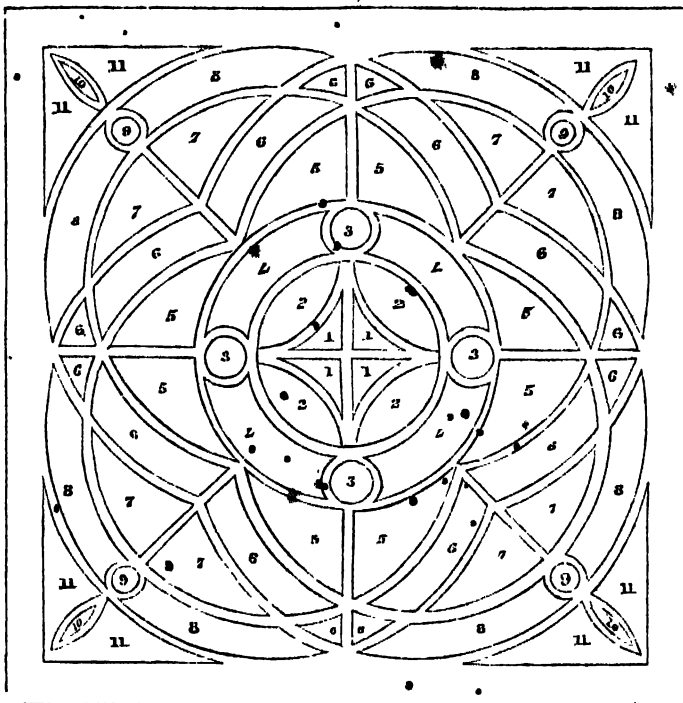
perhaps, though a second swarm rarely becomes very populous. At all events, the question of advantage rests in so much equilibrium, that I had rather, in most cases, let nature alone, unless in some obviously extreme emergency. The oldest queen on record was one of Mr. Goldings, which, at four years of age, or nearly so, filled the hive so full of brood of all kinds before she died, that a large swarm issued soon after (in May), and four more subsequently. As regards the question of bees working in the light, I can only say, that so far as I have seen, they appear to care nothing about it, *if used to it from the first*. Alternations between light and darkness does not do; and they are alarmed where one or the other is not continuous. I saw a hive thus working, exposed to the light, many years ago, I think at Oxford; but the experiment, I believe, is hardly likely to lead to any very useful practical result beyond ascertaining a fact. I mentioned the hive I am now working (altogether of glass at the sides) to a friend, who told me he once saw a number of wooden hives at work, and all without shutters to the windows, of which most of the hives had two. The owner, in answer to a question, replied, that he found the bees did not care about the light, and he left

off making shutters to save trouble. In winter, I should say they would be needed; and, on the whole, I should prefer them. However, you shall judge for yourself next year, when I hope to send you a *light hive*. The good old Doctor is to have one; and he tells me he has already in his mind decided as to where it is to stand. We have just emerged from an argument as to the nature of a *drone egg*, leaving off where we began. You will be grieved to hear that his eyes have failed him of late; his own admirable hand-writing being of late exchanged for that of a secretary.

"I mentioned to Dr. Bevan that the Entomological Society had offered a prize for the best essay on the duration of life in bees, of which I thought he knew more than any one. He says he could do no more than repeat what he has already written." The question, indeed, appears to me to have been settled fifteen years ago by him, Dr. Dunbar, Mr. Golding, and, I think, Sir William Jardine, beyond further dispute (see the "Honey Bee"). But, judging from what has recently appeared as to bees in the name of one of the magnates of the said Society, they do not seem aware that the world has kept moving of late years."

FLOWER-GARDEN PLANS.—No. 1.

THIS, the first of our series of flower-garden plans, was sent to me before the subject was announced for publication. The author is a friend, and a clever gardener, and he had no idea at the time he sent it, that either his "tracings," or anything about them would ever be made public. Having fixed on this plan for our first number, some delay was necessary, to obtain his consent to publish it. He made no observations on the plan the second time, and all that he said in the first letter, was this—"I send you tracings of a flower-garden, which I have some thoughts of laying down here. What do think of it? The colours I merely put down for your good-natured criticism. But I always think a few well-defined and distinct colours better than a larger number. Don't you?" I do think so, for that is the grand secret, after all, of planting a flower-garden for effect. Some plant more, to show the extent of their bedding-plants, their scarcity, and so forth, and pride themselves on the greater number of species or varieties they can thus introduce, and when the space is large enough, and the sizes and position of the beds are such as to allow of all that being effected in "a well-defined, and distinct manner," that kind of pride is very excusable. Some day or other, I shall give the best instance I know of that way of planting a large flower-garden. Meantime, I shall give two reasons for fixing on this for the first plan; first, because the colours are given without mentioning the plants for producing them; thus leaving the field open for young planters, of both sexes to exercise their taste a little, and send us the names of such plants as they would plant in this garden, and this I earnestly invite young artists, as we may call them, to do. Then, after a few months, I shall criticise all that are sent to me, and give the way I would plant myself. As the plans will be numbered, there will be no difficulty in referring to any of them at any future time, and there is a long time before us, between this and next May, without any occasion for pressing on our different styles of planting. All the time that I served at Shrubland Park, the final arrangement of the flower-gardens there was not settled before the middle of April, and those fine gardens have been allowed to be among the very best in the country; and in another year or two, when the whole of the great improvements now going on there shall have been completed, I should not be far



- 1 Blue.
- 2 Dark purple.
- 3 Dwarf box, clipped.
- 4 Bright pink.

- 5 Blue.
- 6 Yellow.
- 7 Scarlet.
- 8 Blue.

- 9 Bright pink.
- 10 Brilliant orange.
- 11 White.

from the mark, if I were to say that would be the finest place in England for flower gardens; and then I venture to say that it will be late every spring before they will settle how the whole is to be planted.

My second reason for this plan is because my friend has introduced a new feature in it, for the first time since I began to plant flower-gardens. I mean his introducing Box as a *relief*, or green colour in beds No. 3, between the dark purple in beds No. 2, and the blue in beds No. 1. This style is all but quite new in this country. I only know of a few places where box-beds, or beds of some flowerless plants are used; but on the Continent, I hear the plan is common, and I know that some old foreign authors treat of this style as quite familiar. The different coloured gravels, pebbles, and sand they use in Italy, in their Italian gardens, is part and

parcel of the same; but here, with our moist climate, and our superabundance of half-hardy and fine-leaved plants, we need not resort to such extremes. Yet, white sand and yellow gravel formed good auxiliaries to many of Lady Middleton's compositions, which we had to fill up; and I know of several places in which some of the old Cape Geraniums, with inconspicuous flowers, are used this way, with very good effect as *reliefs*, as we call them; a new name that I shall have to use often in this series. Then we shall have *neutral* beds, *relief* beds, *mixed* beds, or subdued colours, as well as the more common terms of *harmonious* beds, and beds *contrasted*. I am anxious to have box beds, and box scrolls introduced into geometric gardens, as well as Yuccas, Irish Yews, and a little dwarf Spruce called *Abies Clanbrasilensis*. These last two for strong contrast; the Irish Yew as a slow-growing and fastigate, or quite upright growth; and the *Abies* of much slower growth, and quite flat on the top, with a round head. Also the Irish Furze (*Ulex strictus*), and *Juniperus prostrata* and *squamata*, for the same purposes—strong contrast.

The Irish Furze, or Gorse, is a highly architectural plant; quite as much so as the Irish Yew and Yucca. It was first discovered in the Marquis of Londonderry's Park, in the county of Down. It is soft and silky in the leaves and branches, and bears the knife so well, that it may be formed into almost any shape; square on the sides, round, and sharp-pointed, or flat on the top. The prostrate Juniper makes a beautiful bluish-grey carpet to fill a round bed with, and it can be cut to any shape, and is also a fast grower in good soil. The same are the characteristics of the Juniper called *squamata*, only that it is a stronger growing plant. It could be made into little weeping standards a yard high in the stem, and then be allowed to weep down gracefully on all sides. The culture and propagation of them, as novelties, for the geometric garden, I shall explain shortly; mean time, I have one or two observations to make on the plan before us.

I object to the four entrances at the two ends and two sides, in a garden of moderate extent, unless you have a walk all round it, or a terrace on one or two of the sides; it lessens the effect of the picture, if you allow your visitors, or "company," to walk on straight to the middle of the scene at once, as they will be sure to do, seeing a straight leading walk before them, and as sure as they do, one-half of your garden is, in a manner, lost to them. This is a prevailing fault all over the kingdom, and in compositions, otherwise most beautifully arranged, I would prefer each pair of beds, No. 6, to be united as they now stand, or to be circles or ovals, at the expense of having shore gravel at each end. Then your visitors are put off the "follow-the-rest-like-the-sheep" way of looking over the garden, and still they have a choice of right and left, and then the chances are, that some of them will go this way, and some the contrary way; always a lucky hit for the gardener, who prizes himself on his pet points. There may a trick in this, but depend upon it, the thing is as I say, for few gardeners have had more experience in leading companies through such scenes than your humble servant, to whom all this is as familiar as A. B. C.

I highly approve of beds, No. 3, being planted with dwarf box, and that as thick as possible, to be clipped on the outsides like an edging of box, and either as flat on the top as a dining-table, for the sake of uniformity, or as round as a globe; and if rounded on the top, the height to be in proportion to the diameter of the bed. In this instance 16 or 20 inches would be about the proper height.

I would prefer the circular beds, No. 9, to be green also, but not with box; then all the circles would be green—that is, uniform; a capital and practical explanation of the word, as we gardeners apply it; but how can we make a variety in a thing we call *uniform*? Nothing in this world so easy; plant No. 9 all round with the Rose-scented Geranium, and keep the growth regular with the knife all the season, and the thing is done to a T; and how lucky that 9 is so far from the centre, and from the middle walks, and, therefore, requiring a higher plant than No. 3, which is under the eye. Still my alteration for No. 9 is not a principle, and I have no right to insist on it, being only a matter of taste or opinion. The disposition of the colours by the author of the plan has my unqualified approbation.—D. BEATON.

EXPERIMENTS ON FEEDING COCHIN-CHINA AND SPANISH FOWLS.

I HASTEN to redeem the promise I made, of stating the results of my trials as to what was the cost of the food of Cochin-China fowls, as compared with that of others.

In the course of a few days, I hope to be able to say what has been the consumption of food (under exactly similar circumstances) by Dorkings, Bolton Grays, and some more Cochin-Chinas. In the mean time, it will be seen that these experiments very nearly verify what Anster Bonn, some time ago, in THE COTTAGE GARDENER, assured us was the case (though her opinion since then seems entirely to have changed), viz.:—"That when common poultry are fed twice a-day, it is necessary to feed Cochin-Chinas three or four times, and to give the food so abundantly that some may be left after the fowls have satisfied themselves." For white Spanish fowls have eaten at the rate of 2d. a-week, the Cochins have cost 3½d., 3½d., and 4d. This has been, of course, where there is no farm-yard, which is, I think, Anster Bonn's case.

Before detailing how these trials have been carried on, I may add, that I give you my word that they have been tried in the fairest possible manner. Nos. 1, 2, and 4, have been carried on under my own eye. The food weighed out, and the birds almost entirely fed by myself.

In 1 and 2, the birds had the range of a wire cage, about 16 feet by 9 feet, with a small house attached to each cage. I believe the children were in the habit of feeding them with bread, &c., but the poultry never left the inclosure during the week. They were also supplied with green food.

No. 3, besides being fed as by the list, had the run of a large plantation and a stubble field. I have published the weights, which (varying as they do, some having increased, some diminished) may interest your readers. This lot was not under my own eye, but I have great faith in the accuracy of the person who carried on the trial.

No. 4 had the run of a large grass field and plantation. I am quite sure of the accuracy of the quantity of food consumed, and you will see, that under similar circumstances, a lot of thirteen Spanish poultry, of various ages, ate very little more than five Cochin-China cockerels.

The Spanish hens in lot 4 were deep in the moult, and laid no eggs; but, pray observe, that the Cochin-China eggs (few in number as they were) did not average two ounces each. I may add, that I have a Spanish pullet who now lays eggs weighing three-ounces-and-a-quarter. These are facts, which I leave to the consideration of the readers of THE COTTAGE GARDENER; but I ought to say, that I thought the fairest thing would be to buy my corn in small quantities (by the bushel), as a cottager would be forced to do. The prices I actually paid, were for

Barley, bushel of 60 lbs., 4s. 6d., 1d. per lb.	
Wheat, " 70 " 6s. 3d., 1d. "	
Indian corn " 60 " 4s. 0d., 3d. "	
Meal " 60 " 6s. 3d., 1½d. "	
Bran " " " 4d. "	

These are the weights and prices of this country for good food, and I believe it will not answer to a gentleman or a cottager to feed poultry on bad food.

I leave my cause to plead for itself, believing that *truth will out*. I fancy it is even now prevailing, as I have letters before me from three poultry fanciers, who do not know me as "Gallus," but who write—"I am relinquishing a capital breed of Cochins. I wish to revert to the Spanish, which I once kept." The former are certainly good layers, and very hardy, but their eggs are very small, especially when compared with the Spanish, and they are enormous eaters.

"I am giving up Cochins." They are good layers, hardy, and good flavoured, but they are enormous eaters, their eggs very small, and they are very awkward-looking birds when cooked, their thighs being so large, and their breasts being anything but plump.

"I have been in the habit of keeping poultry for several years, and have calculated their cost per head, in the summer months (say from May to August) at about 1d. for hens, and 2d. for cocks. From August to May, when they require better food, they cost me 3d. per head, besides which they had scraps from the house. The breeds I keep are Spanish, Gold and Silver Pheasant, and Game. I tried

the sort now so much in fashion (the Cochins), and I considered they ate about double what the others did."

So much for the opinion of three unprejudiced people! I have only further to say, that if any of your readers still think that 1d. a-week will keep a Cochinchina fowl, let them (as I did) weigh out 1 lb. of barley (which is about that value), and see how soon a Cochinchina will eat it.

I believe we deceive ourselves in saying "our poultry only eat so much," for we forget the bread, the potatoes, and other scraps, which would, if the cottager kept a pig (as I advise every one to do), go towards its food, instead of to the poultry, so that if the fowls cost less, the pig costs more.

I am very glad, for my own sake, that I made the experiment, and I am firmly convinced that the time is not far distant, when many now opposed to me will be ready to own I am not very far wrong. (GALLUS.

Time of Experiment—Oct. 4 to Oct. 11.

Lots	Description	Age	Weight Oct. 4	Weight Oct. 11	Quantity of food consumed	Cost	Weekly average	No. of eggs	Weight of eggs
1	Cochin-China Cock	1851	Not weighed.	Not weighed.	Meal 3 15 5	d.	d.		
	Cochin-China Hen	1851	Not weighed.	Not weighed.	Bran 2 0 1		3½	4	8
	Cochin-China Hen	1851	Not weighed.	Not weighed.	Corn 5 2 4½				
					11 1 10½				
2	Cochin-China Cock	1851	Not weighed.	Not weighed.	Meal 4 2 5				
	Cochin-China Hen	1851	Not weighed.	Not weighed.	Bran 1 15 1		3½	6	11
	Cochin-China Hen	1851	Not weighed.	Not weighed.	Corn 5 5 5				
					11 6 11				
3	Cochin-China Cockerel	1852	lbs. oz.	lbs. oz.	Meal 4 0 5	s. d.			
	Ditto	April	8 5	8 4	Wheat 14 0 12				
	Ditto	May	7 13	8 8	Pota- 5 0 2		4½		
	Ditto	June	7 0	7 9	toes				
	Ditto	June	6 14	7 9					
	Ditto	June	5 14	5 12					
					23 0 19				

Time of Experiment—Oct. 7 to Oct. 14.

Spanish Cock	1850								
Spanish Hen	1851								
Spanish Hen	1851								
Spanish Hen	1851								
Spanish Hen	1851								
Spanish Hen	1851								
Spanish Cockerel	1852	Not weighed.	Not weighed.	Barley 7 0 7					
Spanish Cockerel	1852			Wheat 6 0 6					
Spanish Cockerel	1852			Meal 5 4 6					
Spanish Cockerel	1852			Bran 2 8 0		14	2		
Spanish Pullet	1852			Indian Corn 4 0 3					
Spanish Pullet	1852								
Spanish Pullet	1852					21 0 20			

[NOTE BY THE EDITOR.—We readily declare our belief in the accuracy of the above report, because we know the writer to be an honourable man; and we have but two objections to make to his experiments, and they are these: First, that he did not have his Spanish fowls separated into threes and five, the same as the Cochinchinas. This is not an objection for objection sake, but founded upon our own experience, and the experience of others, that two or three fowls by themselves will consume proportionately more food in a day than when a great number are fed together. Whether this is the result of the fowls being less interrupted, and having less to divert their attention from the food trough, we shall not attempt to explain; but this we know—fifteen fowls fed together eat less in twenty-four hours than the same birds divided into threes, and fed each three in separate places, eat in the same space of time.

Our second objection is, that we have not the weights of the full-grown Spanish fowls, as well as the weights of the full-grown Cochinchinas. We suspect that the weight of the latter must be nearly double the weight of the former, and, if so, it is not so great a marvel that they eat nearly twice as much.

We have tried one experiment ourselves upon this subject very recently, and it yields a very different result, explicable upon no other grounds, as far as we can see, than that the birds were all fed together, and that ours in the south have not the keen appetites bestowed upon their brethren in the north, by its colder breezes.

Our experiment extended from Oct. 18th to Oct. 19th, both inclusive. In one yard were fifteen cockerels, and in

the other twenty-seven hens and pullets, all pure-breds, from the stocks of Mr. Punchard, Mr. Moody, and Captain Hornby, with the exception of three hens imported from Shanghai, and two hens, crosses between Cochins and Dorkings. Their respective ages and average weights (in the morning, before being fed) were as follows:—

9 cockerels, aged three months, average weight	- 2 lbs.
4 cockerels, aged four months, average weight	- 4
2 cockerels, aged six months, average weight	- 6½
8 pullets, aged three months, average weight	- 1½
6 pullets, aged four months, average weight	- 3½
9 pullets, aged six months, average weight	- 4½
6 hens, average weight	- 6

They were fed upon the following articles, to which we append the weight and price:—

Barley-meal, 40 lbs. per bushel, 3s. 9d.

Barley, 22 lbs. per bushel, 3s. 9d.

Oats, 35 lbs. per bushel, 2s. 9d.

Rice and greaves, averaging 4½d. per lb.

They were fed in troughs, barred across the top, so that they could not trample in the food, nor waste it in any other way; the troughs were never allowed to be empty, and they had a roomy yard, with access to grass for an hour or so daily. The supply of water unlimited. They consumed during the time—

25½ lbs. barley-meal	- 25½d.
4 " bran	- 2
14 " oats	- 14
14 " barley	- 14
4 " rice	- 9
2 " greaves	- 9
6½ lbs.	6½ pence.

So that the 42 fowls consumed food which cost 6½d. in seven days, being scarcely more than three-halfpence per week each. If this had been a cheap potato year, so that boiled potatoes could have been partly substituted for barley-meal, we are certain that the expense would have been nearer five farthings a week. As in the experiments by "Gallus," the corn was bought of a retailer; if bought by the quarter it would have been somewhat cheaper. During the week the six hens laid seventeen eggs, weighing from 2½ to 3½ ozs. each, and two double-yolked eggs, weighing 3 ozs. each.]

Antler Horn in a letter, from which the following is an extract, says—"I enter on the subject now, for this last time, from a desire to reply, with all willingness, to "Gallus's" question. At the dinner to which he refers, the opinion of the fowls in the dining-room was not pronounced so decidedly as out of the dining-room, because it was, on both sides, somewhat repressed by politeness. Although, from keeping but one kind of fowl, I lack the opportunity to join in "Gallus's" experiments, I shall feel great interest in their result; in aid of them, I can only offer the knowledge which I possess. The cost of corn and meal of various sorts to me, during the whole month of September, was £3. 4s. 6d., and the number of fowls being 140. This (about five farthings a-week each) gives rather a greater increase on the preceding months than I expected; but among these fowls are included fifty cocks near maturity: an extravagant disproportion, which would scarcely be tolerated by persons desirous of feeding with economy."

VISITS TO SOME OF THE CHIEF POULTRY-YARDS OF ENGLAND.

[MR. STURGEON'S.]

TIME was, and that within the memory of those who do not wish to think themselves old men, that a trip down Father Thames to Gravesend was an uncertain, and therefore somewhat serious undertaking. If the wind was favourable, and the tide suited, the light little river craft, then called "packets," ran you down merrily enough; but if the breeze failed, and the tide was against you, great was the consumption of patience—and tobacco. Independent of the wind, and comparatively but little affected by the tides,

the introduction of steam-boats put a new face upon the matter, and ultimately the formation of the Blackwall Railway, and an arrangement between the Directors of it and the Steam Packet Companies, to run in connection with each other, have reduced it almost to a certainty. By these means the inhabitants of "Cockneyshire" exchange the smoke of the city for that of the steamers upon the Thames; enjoy a stroll over the new town of Gravesend, and drink their own porter in the gardens upon the hill, where, at the time we have first referred to, we used to shoot rabbits. Of these gardens we may again speak upon a future occasion, but it is of a spot at an intermediate stage of the journey that we propose to-day to discourse.

We will suppose, then, that the reader has taken his ticket at the Blackwall Station. For 1s. 2d. by the first, or 10d. by the second class, he may travel by rail to Blackwall, and thence by the steam packet to the village, once, we are told, the market town of Grays, which is situate on the Essex side of the River, three or four miles before you reach Gravesend. One of those useful wooden piers, so common upon the Thames, runs far enough into the river to enable the steamers to land their passengers in any state of the tide, and for this accommodation sixpence additional is charged.

Leaving the toll-house behind you, you will observe, at a distance of a hundred yards or so, an old square manor-house. This is the dwelling of Mr. Sturgeon and his family; and let us whisper to you, kind reader, that if you are often in the habit of visiting a more hospitable mansion, you are, in our opinion, an exceedingly lucky fellow. We assume that such of our readers as are poultry-fanciers will have heard and read, more or less, of Mr. Sturgeon's Cochins-China fowls; and having told those who were not before aware of it how to reach their abode, we are now about to communicate to such as are unable to avail themselves of that information and to see for themselves, the result of a recent visit to Grays. Let us say, first of all, that there is no pretension to a handsome or costly poultry-house. The Messrs. Sturgeon farm a large tract of land; their poultry, consisting of Cochins exclusively, are kept as part of the stock of their farms; and all that is aimed at in the buildings and places in which they are located, is just sufficient to insure their health, their comfort, and their safety. There is, moreover, none of the nonsensical mystery of concealment—learned, we suppose, from the tricks of the dealers—which are seen in the yards of some of our fanciers; at Grays all is freely shown, and all as frankly told. The history of Mr. Sturgeon's flock is a brief one. His first birds were a present from the captain of a vessel, who brought them direct from Shanghai. The cock was killed by a fox, and the stock was reduced to the hen, which was sitting, and her embryo brood. From these, with the addition of such new blood as he has been enabled more recently to procure, the judgment and attention of Mr. Sturgeon have produced his present magnificent stock. Let our young fanciers derive hope and encouragement from these facts, for each of them has now better opportunities than, five years ago, Mr. Sturgeon possessed.

We have stated that there is no display at Grays. At the back of the house, at a corner of the kitchen-garden, is a plain shed, much such an one as we shall presently have occasion to describe; in this Mr. Sturgeon's breeding birds, or the best of them, abide during the spring months, and their "walk" is a part of the kitchen-garden. It is fenced off from the rest by a length of wire, over which you can step, but which the birds never attempt to pass, so easily are they confined. They run about under some raspberry bushes, and among the cabbages; and we were surprised to see how little mischief they appeared to do. The floor of a small grapery, at the opposite corner of the garden, is given up in early spring to the young broods, who have here light, air, and warmth, and are allowed to run out a little in the middle of the day.

At a distance of a few hundred yards from the house, and near to a little wood, sloping to the south, is the cottage of the intelligent man under whose care the birds are principally placed. Adjoining this cottage, and at a little distance from each other, are two sheds, measuring perhaps (we speak from memory) fifteen feet by ten feet, built of wood, and thatched with reeds from the marshes. There are no

perches, the floor being of open rails (perhaps three inches wide), and the rests are composed of wooden partitions at the end. Excepting those located, as we have said, in the garden adjoining the house, these are the dwelling-places of the best of Mr. Sturgeon's stock, their run out being into the wood and field adjoining. At Ockenden, about five miles from Grays, is another farm occupied by Messrs. Sturgeon. Here are a mill and a lodge-gate, at each of which places a similar plain shed is erected; and in these, and one or two more such at convenient points on the farm, the rest of the birds are parcelled out in lots. Our readers will see, from this simple description, that, although they may, perhaps, not need so many, it is not difficult for them to provide for their feathered favorites places of abode to the full as good as those which Mr. Sturgeon finds sufficient for his. We should ourselves suggest the addition of a perch about eighteen inches high, for which we have found nothing so good as a fir pole split down the centre, the round side being upwards, and the bark left on.

It remains to say a few words of the birds themselves, for it is to them, in truth, and not to see the places in which they are kept; that a visit to any poultry-yard should principally be paid. The prevailing colour of Mr. Sturgeon's birds are the different shades of buff and yellow, with such an admixture of other varieties as the most judicious crossing cannot prevent. The system of dividing them into lots, suitable to the amount of accommodation afforded by each "walk," and of separating the sexes as soon as they are fit to leave the mother, which the number of Mr. Sturgeon's separate "walks" enables him to carry out, promotes the growth, and improves the plumage of the young birds. Having bred, during the two last seasons, extensively, he has had abundant opportunity to select the most perfect in form and colour, and his judgment has made the most of his opportunities. Hence it is that Mr. Sturgeon's birds have carried off the prizes at all the shows (save, we believe, one) at which they have been exhibited, and although others may, and probably have, bred some birds as good as his, we doubt if at this moment any poultry-yard in England can show so many good, with proportionately so few indifferent, Cochins. A reference to our advertising columns shows that our readers may have an early opportunity of testing for themselves the correctness of the opinion we have expressed by looking in at the sale of Mr. Sturgeon's surplus stock at the Baker Street Bazaar, on the 2d November, and perchance some of them may even become the purchasers of some of the fowls of which they are now reading an imperfect account.

We should, perhaps, add, that there is nothing particular in Mr. Sturgeon's mode of feeding his poultry; the different species of our own grain, some whole and some ground, and mixed with water (a little sweet milk, where it can be spared, is an improvement) with occasionally a few tallow-chandler's greaves, being the staple of their food.

We take leave of Mr. Sturgeon and his flock, sincerely wishing him a good sale, and thanking him and his family most sincerely for their courtesy and hospitality to those whose good fortune it has been, like our own, to visit them at Grays. B.

THE SHELDRAKE AND ITS HAUNTS.

(Concluded from page 51).

The stile at the foot of the wharf (nobody can call it a *quay*) is mounted, and here at once is a charming and novel promenade. On the left, just across the channel of Blakeney harbour, are the salt-marshes, in the state they remain from natural causes. We will have a stroll over them another time. On the right are the valuable marshes of Cley, reclaimed by the simple but costly erection on which we are treading. Several hundred acres have been inclosed by a mound of clayey soil. The ditch formed by its excavation acts as the main drain; a sluice-gate lets off the superabundant water at lowest ebb,—and that is all. Here are fat sheep and oxen grazing, there are gulls and all sorts of odd things. I like the odd things, and hope they will not be exterminated; but they will have a hard battle soon. From this to Weybourn all is to be brought into trim order; and then the rest of this line, as well as the marshes round

the other corner of the coast, will follow. Were I only born to a thousand acres of salt-marsh, half of it should be devoted to the preservation of unreserved game. But the local papers already display a long advertisement headed, *REGULATION OF LAND*, and concluding with a signature, "Solicitor to the Bill." Farewell to the salt-marsh of olden time. Farewell to wild swans, ruffs, and reeves, and sheldrakes.

The circumvallating ridge makes a bend, and we now have a fine view of what, were we out at sea, would be called the line of coast, for the sandy flats and marshes are thence invisible. The parish church, startling on elevated ground, is the central object, with its curious supplemental bell-cotower, and the low sunlight gleaming through its windows. On the left are the pudding-shaped hills of Sheringham and Weybourne; behind that broad and lofty knoll on the right, dwell the cockle-gatherers of Stiffkey. Yes; take care of your hat: till to-day you hardly knew what "an airy situation" meant. Other breezes may waft the luxurious odour of the spices of Arabia; this bears something better on its wings,—a healthy, hungry appetite. This chestful of air, at least, has not passed through a thousand pair of lungs before entering mine. If one had but in one's frame-work a reservoir for fresh air, as the camel has for holding a store of fresh water, it would be worth coming here to breathe once or twice a week. Talk about plants and shrubs purifying the atmosphere, and throwing off oxygen! Give me this, fresh from the north sea, for the gale to blow in my winter-garden. How delighted the little wavelets are, jumping in the harbour, running races to the shore, and friskily displaying their white shirt-frills! Give them a little more room, and they would soon grow into sturdy full-sized breakers. 'Tis a comfort to know that we could not lose our way wandering along this bank, even if we were caught in a fog, or had lingered after dark.

The tide is ebbing, and the boat awaits us. To get to it, we must pass—what were under water when we mounted the bank—the small pits, or depôts, where shell fish are kept for daily use,—shallow hollows, dug out on the shore, ten or twelve feet, more or less, square; for the squareness is as uncertain as the size. *Parcs aux huîtres*, or oyster-parks, the French would call them. Each pit seems to contain a small collection of mussels at one end, and of oysters at the other. See that rough-looking fellow with his mussel-rake, of eight or nine flat iron teeth, through holes in which a coarse net is laced. In fact, the implement is at once a rake and a landing net; with it, he first collects his treasures in a heap, and then ladles them out to the dry land, to be picked and cleansed, and packed in hamper. Mark the oysters, too, mostly lying with the *hollow* shell upwards, their natural position in the sea, instead of, as we have seen them packed in barrels, with the *flat* side uppermost. Oysters in the sea, laid wrong, will contrive to move till they get themselves right. People who doubt the vivacity of the oyster should visit these pits on a hot summer's day; the spitting, and spurning, and rattling of the assembly, will astonish them. The whole bed of the channel, or "cut" whereon we are about to embark, is covered with oysters and mussels, belonging to different proprietors. These chain cables, reaching across the bottom from shore to shore, mark the limits of each. Great part of our way down to the cockle-grounds will be over oyster and mussel pits or "lays," as they are called, stored with growing or fattening fish: oyster-parks, also, on a larger scale; for the oysters are dredged along the coast, and brought hither; and the mussels, too, are fetched principally from Lynn Deep and the Wash. Those *musselmen* who are not pressed for ready money, find that it pays to let these mussels remain *two years* in Blakeney "lays"; they grow and improve so much by the change of water. A mussel, when it comes to table, can hardly be less than four years old; a periwinkle, five or six. Cockles attain an indefinite age; in proof whereof the best and finest samples are only to be had from newly-discovered beds. You will note in returning, when many of these pits will be left by the tide, that the mussels are laid in deeper water, and much less exposed to be deserted by the tide than oysters. The smaller mussels, that have not thus been put up to fatten, are, in England, used rather for bait than for human food. The fisherman scoops out the

mollusc with his knife, and attaches it to the hook, raw. Whelks, which are also used as bait for cod-fish, are cracked with a hammer on a stone, and hooked *alive*. They are the best of bait; so tough that they never drop off, even if they are not taken by a fish for a week. Whelks are collected on several points of our coast, and are eaten largely by the children of the natives, although not by townspeople hereabouts. For the youngsters they are simply boiled; when adults partake of the mess, they are usually finished off in the frying-pan. Neither these, cockles, nor periwinkles, are kept alive in *vivaria*, or pits, or *parcs*, but are gathered, for the occasion, from their native.

The boat is manned by our polite host, who takes the helm, and by a second hand—in appearance a round bale of blue flannel, standing on two posts, that are encased in blue worsted stockings, and terminated by a short leather casing, to represent shoes. The entire package shall be veiled under the assumed name of Mr. Blackfaced Broadback, if it is possible to conceal anything so bulky. The sail is available for this reach. Down we glide. Overhead flits a pair of curlews, whistling their measured cry. The gun is on board: it would be pleasant to take home a few fat specimens of those. The culinary world is scarcely aware of their roasting merits. We turn to the left, and enter "the Pit:" the sail must come down. A pair of oars with the tide will carry us fast enough. A little flock of Stints wheel round us, and alight on the muddy shore that has arisen from the waves not ten minutes ago. Paddle gently up to them; there they run. Make ready! Present! Bang! There lie some of them; but how to get them? We've no dog. The boat is run aground. In jumps Broadback, up to the thickest part of his blue posts. He care for wet feet! Well, the game is not much, though some. Off quickly, or the tide will leave us stuck fast here. The *cockle-iferous sands* are yet too quick to venture on; what shall we do? Here's the pilots' house, standing on that wonderful tongue of sand and shingle, called "The Meals," before alluded to. Let us get out and walk, for we have at last arrived at the land of the Sheldrake. This is the *tide-pole* belonging to the pilots, reminding me of what I knew of Robinson Crusoe's almanac in younger days—a northern milemeter, measuring (upwards) the depth of the German Ocean. "What water was it at the pole?" is the twice-a-day question at Blakeney. They are not Trinity-men, but privileged denizens. Eight is their number,—four at a watch. None are here at this state of the tide, so we must be content to peep in at the window. The glass is dull; but the little round hole, through which their telescope is thrust, has not that defect. See, they have bed and board; that is to say, hammock and bench. In the middle is their stove, to heat the kettle and fire the frying-pan. It is placed *there* to economise warmth by its flue. Those square boxes contain each its owner's signal lantern and apparatus. One specimen lantern hangs on the hook there. The hut is but a dingy hole; still we should think it a paradise, if we were dragged into it after having been shipwrecked on the sea-side of the Meals. Yesterday I saw a woman (the wife of a master of a collier) who last week passed two days and a night lashed to the mast of a wreck. She was just beginning to recover the shock to body and mind.

Walking around the hut, one says that the pilots might improve their fashions; they are too Scotch in some matters. Proceeding, we find ourselves in a new world. How absurd to run over to the continent for *novelty* alone, till a man has ascertained what there is to see in his own country. Sand, shingle, and mud, are our three elements, or rather materials here. Wind and water are the two rival autocratic powers. The wind has a powerful ally in the Marram grass. Wind steals sand from the beach; Marram appropriates it, and keeps it. Mount this hillock, and the dodge is detected. You will also learn why sheldrakes are styled burrow ducks. Sand-wreaths are formed on the same principle as snow-wreaths, and do not melt. In these the rabbits burrow, and prepare nesting-places for the sheldrakes. Our dry sandy shores produce another grass, the *Poa bulbosa*, peculiarly fitted to inhabit such ground. Its bulbs grow in clusters, resembling little shallots, and during most part of summer remain inactive, blown about at random. With the autumnal rains they vegetate, fix themselves

by long downy radicles, then produce thick tufts of leaves (a grateful spring food for cattle), and in April or May they flower, having in the meantime formed young bulbs, which, as soon as the herbage withers, are dispersed like their predecessors. This summer dispersion is the cause why the plant remained so long unknown to botanists. Has any one been here with a vast bread-grater, and grated brown-bread crumbs over that muddy hollow of four or five acres? They are the casts of the marine worm, which here socially enjoys itself. The bottom of the next pool is dotted with an infinity of black spots, not the size of a peppercorn. Look at them: they are baby periwinkles, to make feasts for human babies that are as yet only "on their way." These are the food of the tender sheldrakes; with a daily supply of these, I could have reared my pretty pair.

Correspondents pester editorial gardeners to know what ornamental shrubs will grow within the influence of sea-breezes. We are in the midst of patches of one that would ornament any lawn. The *Salicornia frutescens* has the unusual appendage of *evergreen; succulent, hardy leaves*. Are you gardeners enough to make it grow with you? I have managed to keep it alive for a year or two.

What a regiment of gulls!—young birds mixed with those in adult plumage,—with "*old Mous*," as Broadback calls them. "Shute them? Might as well shute at a Grinlin (Greenland) bear! Them there things, and the Danish (hooded) crows too, know when anybody have a gun, as well as what we do!"

Time passes, we return to the boat, and find the channel of "the pit" and "the harbour" inclosed between high walls of shingley sand, the mass of which is found to extend daily. All that point, from the pilots' house to its end, has been gathered by the waters within the last six-and-twenty years, and is still increasing. Before embarking, we will root up a few botanical specimens, and, for private reasons, I shall make free with this rusty piece of old iron hoop.

We are again afloat; the cockle-ground over the way is in capital order; but, get as near as we can, there are many yards between us and dry land. Broadback is overboard. A ride pick-back on that blue pale of flannel saves us wet ankles, though we will say nothing about wet feet. What painter (Copley Fielding, perhaps) could put this scene within a gilt frame? Miles upon miles of trackless sands! We will stick up this bit of drift-wood, as a land-mark, in case,—who can tell? Sudden fogs, or spring-tides, might puzzle us to find the boat.

But is *this* the famous cockle-ground of Norfolk? Where are the cockles? None are to be seen. They *are* here, nevertheless. Now for the use of our old iron hoop. We will give it a preliminary flourish, for luck. Who wants shaving?

To business! Half-a-mile off is a fellow stooping at work. Let us join him. In one hand he has a wooden cockle rake,—a short-handled thing, set with iron teeth; with the other he picks up the cockles, and throws them into his basket. Ah! I see! The cockles lie *beneath* the sand, embedded in it, at a depth of from half-an-inch to an inch-and-a-half. This is a British California, and these are the diggings. Neither gold, nor cockles, grow on hedges: both have to be worked for. We have brought our basket: the iron hoop shall be fairly divided. You take one half, and I the other. Now scrape away. Bravo; this beats the rake! That fellow loses many a nice one between his rake's teeth. The old ladies from Stiffkey prefer iron hoops to rakes. Another handful of cockles; and here, another! We shall fill the basket. This man only happens to be out *cockling* because he has nothing better to do. The regular female professionals are not here to-day, because the carriers' carts (departing twice a week) have all left this morning; otherwise you would have seen a numerous coterie, with succinct drapery, mahogany legs, and incessant clack; still they have a discipline, and a *fair-is-fair* sort of feeling among themselves. They think this sport, in all possible weather, no hardship; nor grumble at carrying a bushel of cockles two or three miles. Shut them in their cottages, and keep them incessantly to the loom, or the needle, and they would soon pine and die, if they did not go mad.

There; we have filled the basket, a good peck-and-a-half, and have earned a shilling, at eight-pence the peck. The good folks here rake three "culls" of their gathering, and

sell the best at three-pence a quarter. Ours are a beautiful sample, clean, not gritty, large, well-flavoured. A man from the next parish discovered this particular "digging" about three weeks ago, and made a fine harvest, till the Stiffkey folks found out his secret. But the tide is flowing, and will carry us up-channel. Time to be off: it is getting dusk, and coming on "roky." Those are not ships, as seen through the misty air, but ghosts of them. Darker and darker, and no moon. The keel of the boat scrapes against the oyster "lays," but does not stick, the tide bears us upwards and onwards so fast. There shines the light of a forge, to serve as a beacon. I wonder how Broadback can find the way, amidst those intricate creeks and mud-banks. "And I," says Broadback, "wonder people are not afraid to travel by night through those lonesome roads, and lanes, and woods." And here we are at last at Blakeney; the day's excursion is ended. I feel a vacancy about the region of the stomach that will not be easily filled up. Afterwards, we will amuse ourselves by roasting cockles for dessert.

South of the Wash, the sandy dunes of Norfolk, called "Meals" and "Marram Banks," are the only places on the east coast of England where there is any chance of catching the sheldrake in the act of nesting; and that chance is yearly becoming less and less, solely from the intrusive curiosity of man. For in front remains the sea, and behind, at present, the salt-marshes; while the rabbits are as numerous as ever, to scoop out the required excavations. The sheldrake is no excavator, and yet it *will* have a cavern for its nursery. How it arranges matters with the rabbit, of whose house it takes possession, is not so easy to guess as in the case of the puffins, who are equally impertinent in other warrens. They have a bill that would furnish a sharp answer to any rabbit that undertook to remonstrate too obstinately at the mouth of his hole. The want of this underground retreat is one reason why sheldrakes so rarely breed in confinement. They have been successfully tempted by artificial burrows near the water's edge; and a hollow tree let into the bank, forming a sort of blind tunnel, or choked-up drain, has proved irresistible. The darkness seems to be one of the conditions which pleases them; for a tame pair, not being able to find any subterranean hiding place for their eggs, deposited them under the thickest obscurity of some clipped yew. By attending to these natural requirements; by now and then giving the old birds a treat of small cockles, mussels, and periwinkles; and by letting their young have a daily ration of fresh sea-fish chopped fine; it may be expected that this very striking bird will be reared more frequently than it now is, in the tiny lakes which give so pleasing a charm to our lawns and our shrubberies. D.

TO CORRESPONDENTS.

VINES (*Omega*).—We are not aware of any work which treats specially of Vines in pots. Before answering your questions safely, it will be necessary to know the age of your plants, the diameter of the shoots in their thickest part, and the size of the pot they are in. This obtained, we will give a satisfactory answer.

APRICOT AND QUINCE (*H. M., Herts*).—Your *Breda Apricot* is not an uncommon case. We had one as large as an apple-tree, which stood for fifteen years without producing a crop—in deed, it seldom set any; but it was too far north (Cheshire). Hertfordshire should produce one. Your "not very free exposure" means partial shade, and this will not do. We would remove it to where it gets every hour's sunshine, and plant it on the ground level, with only a foot of soil beneath it, and that plain loam; no manure. *It must not grow strong*; and succulent wood should be pinched in from June and July. You may prune away all the coarse young wood on removal. The only one we ever saw cultivated with high success as a tree was, like yours, at Hampton Court, at the Royal gardens. Thirty-five years since, we have seen this tree laden with fine fruit, and once partook of a tart from the produce; this was excellent. Your Quince that is mildewed, and has ceased to bear, must have a thinning, and receive the sulphur mixture when at rest; also top-dress with old vegetable matter. The Quince is very liable to this mildew. Prune your nuts heavily, and root-prune them.

ERRATUM.—Page 28, line 35, for *monstrous* read *monotonous*. SEVEN HARDY CLIMBERS FOR GREENHOUSE, AND CONTRASTING IN COLOUR (*N. S. E.*).—*Pueraria racemosa*, purplish *Bignonia capensis*, yellow; *Pasiflora carulea*, blue; *Keneleda Murrayana*, scarlet; *Mandevilla suaveolens*, white; *Tecoma pinnatifida*, rose; *Bignonia chetura*, reddish-dull-orange. These will do planted outside of the house, but the roots and stems (as much as is outside) must be protected, the former with litter, the latter with square boxes set against the front wall, filled with sawdust, and capped from wet. They will succeed also in pots or boxes inside the house, but they will grow more rampant in the border.

TWO PLANTS FOR THE BACK WALL OF A GREENHOUSE (*ibid*).—You have not said for what purpose. If merely to keep green, try *Cissus*

practicable. **POTTED PLANTS**, for forcing, plunge in the earth of a well-sheltered border facing the sun. **FRUITS** shrubs and trees generally. **RANUNCULUS**, plant for earliest bloom. Seedlings of them, in boxes, &c., remove to a warm situation. **WEAK ROSES**, prune without delay; very strong ones, delay pruning till March; tender ones, secure from frost with moss, fern, &c. **SHRUBS** of all kinds, plant, stake, and mulch. **SUCKERS**, from roses and other shrubs, separate and plant. **TIGRIDIAS**, save from frost as long as possible; should not be dried till January or February. **TULIPS**, finish planting, b. D. BRATON.

GREENHOUSE.

AIR, admit rather freely in dry weather. **AZALEAS**, for blooming early, keep in the warmest end of the house, and they will not lose many of their leaves; if the buds are well set and prominent, a few may receive the heat of a plant stove, to bring them in by Christmas; those once forced will come earlier of their own accord again. Those for flowering in spring and early summer keep as cool as possible, so that the temperature is above 35°. **BULBS**, such as hyacinths, tulips, narcissus, &c., pot for spring flowering, and so manage them that roots shall precede flower-stems. **CAULOCALARIAS**, keep growing slowly, in an airy, moist atmosphere; seedlings, pot off, and prick into pans; cuttings of shrubby ones may now be potted, and cuttings may even be put in the beginning of the month, in a cool, moist place. **CAMELIAS**, finish setting in; and the late ones may have their buds thinned, if necessary; the earliest will now be swelling, and a little cow-dung water, cleared, and not too strong, will do them good; these should be placed with the forward azaleas. **CINERARIAS**, encourage the forwardest to grow in a moist, gentle heat; keep those for spring and summer, just moving. **CLIMBERS**, however beautiful, cut back to give light to the other plants. **CHRYSAETHUMS**, remove incipient roots from the axils of the leaves on the main shoots; thin the buds where too thick; encourage with manure water; and if not all in doors, have protection ready. **DAMP STAGNANT AIR**, avoid. **FIRE**, light in frosty and foggy weather, that air may be given; but give artificial heat during the day, rather than at night, unless the frost is very severe. Choose a sunny day, if possible, to light your first fire, as your flue, &c., will be more easily dried: it is no joke to be fixed in a stock-hole behind a fire that will not burn. **FURNACES** and **FLUES**, clean out previously. **HEATHS** and **EPACRIS**, keep in the airiest part, especially the former. **GERANIAS**, **CYTISUS**, **CORONILLAS**, &c., syringe in a sunny day, and aid with manure water, to cause the bloom to open strongly. **GERANIUMS** or **PELAGONIUMS**, encourage the old plants with a good position; train into the desired shape. Nip any luxuriant shoot, so as to equalise the strength; keep fresh potted ones just moving. **GOMPHOLOBIUMS**, *Platylobium*, *Chorizanthe*, &c., place in double pots, that they may be more uniform in moisture, as extreme dryness and extreme wet will alike be their ruin. **PLANTS**, keep clear from dirt and insects, by washing and fumigation. **TEMPERATURE**, keep from 40° to 45° at night. **WATER** only when necessary in dull weather; little will be wanted, unless for plants swelling their flower-buds; for these use water warmer than the air of the house. A slight dusting with the syringe over the foliage will be serviceable in a sunny morning. **CLEAN** pots, paths, stages; tie, train, and fresh label in bad weather.

R. FISH.

FRUIT-FORCING.

CHERRIES in TUBS, &c., protect roots. **CAPRICUMS**, dry off at root to ripen them. **CUCUMBERS**, afford necessary heat, not below 70°, with air-moisture and all possible light. Early forcing prepare for. **FIGS** for forcing, get to rest; protect pots or boxes, as also branches. **FLUES**, clean all and repair. **INSECTS**, continue the warfare against, also preventive measures. **MUSHROOM-BEDS**, provide succession; spawn when down to 75°; sprinkle beds where the Mushrooms are coming through; keep a moist air. **MELONS**, sustain 75° bottom-heat, 70° top-heat, with abundance of air; fumigate if infected. **NECTARINES** and **PEACHES**, prepare for early forcing, by using the wash so often named in this work, pruning them previously. **PINES**, in dung-pits, improve declining heats; 60° to 70°, with liberal ventilation. **PINES**, late fruiters, 50° more; air in moderation. **REPAIRS**, carry out directly in all houses. **REST** fruits for forcing, plunge and protect wood. **STRAWBERRIES**, in pots, plunge and protect. **VENTILATION**, attend well to during dull periods. **VINES**, for early forcing, as *Peaches*; if roots outside, protect borders directly. **Vines**, in fruit, fire occasionally; ventilate freely; keep very dry, and use scissars weekly.

R. ERRINGTON.

ORCHARD.

BORDERS, autumn-dress. **BUDS**, cut bandages off. **CHESNUTS**, gather. **DAMNS** to KILL INSECTS as soon as pruned. **FRUIT**, gather all remaining. **FRUIT-TREES** of all kinds plant. **FRUIT-ROOMS**, ventilate freely. **FRUIT-STONES**, pick over. **INSECTS**, wage war against, at every opportunity. **MELONS**, preserve. **MULCH**, apply to newly-planted trees. **NUTS**, remove suckers from. **NAILING**, proceed with, in order to expedite spring business. **PRUNING**, perform in the following order: 1st. Bush-fruit, then Cherries, Apples, Plums, Peaches, Vines, &c., and ordinary Pears, reserving choice ones, Apricots, Figs, &c., until spring. **PROTECTION** for blossom, lay by from shrubbery or walled plantings. **PLANTING**, proceed with, all but Figs and Vines. **RASPBERRIES**, plant suckers from, and prune. **ROOT-PRUNING**, perform immediately. **STAKING**, &c., to. **STRAWBERRIES**, remove rubbish between rows, and manure, but cut not the foliage. **STATIONS**, prepare. **TRAINING**, carry out betimes. **TOMATOES**, ripen before the fire. **TORRENTING**, apply. **WALKS**, turn or clean for the winter. **WEATHER**, provide in-door work for a bad season, such as labels, stakes, training pipes, &c., and grind your bill-hooks, and file your hand-saws.

R. ERRINGTON.

ORCHID HOUSE.

AIR will seldom be required during this month; keep the air inside much cooler, because most of the plants ought now to be in a state of rest. **BASKETS**, plants in, should only be syringed; they ought to be so placed that the drip from them may fall into the walk. **DIVISION**: such plants as *Stanhopeas*, *Gongoras*, and *Acropora*, may be divided this month, with a view to increase them; give these no water till they start into growth again. **HEAT**: the thermometer in the warmer house should be allowed to fall to 55° in the night, and never exceed 70° by day; 55°

without sun will be sufficient. **POTTING** will be required occasionally; even at this untoward season of the year some plants will grow, and, therefore, must be potted, because if delayed the young roots will begin to push, and then it is difficult to pot without breaking them. **REST**: keep all the plants possible at rest for the next two months; the means are a cooler and drier atmosphere, and no more water at the root than is absolutely necessary to prevent the pseudo-bulbs perishing. **STRAINING** will be necessary to plants on blocks two or three times during the month. **WATER**, apply sparingly, except to plants growing; to these a larger quantity may be given. T. APPLEY.

PLANT STOVE.

AIR will still be necessary to this department; give it early in the forenoon, and close the opening by two o'clock. To sweeten the air, light the fires early in the morning, and give air accordingly; this will allow a large body of fresh air to enter the house, which will displace as much foul air. **CUTTINGS** of stove plants should all be potted off early this month if rooted. **BULBS** should now generally be at rest; keep them dry and moderately cool, to prevent a too early excitement. **FORCING-PLANTS** for this department should be commenced slowly, early in the month, such as *Azaleas*, *Lilacs*, *Laburnums*, *Rhododendrons*, *Roses*, &c. These will flower in December or January. **WINTER-FLOWERING PLANTS** will now be showing their flowers. They should have a moderate supply of water, and occasionally a watering with weak liquid-manure. Keep every part of the stove perfectly sweet and clean; remove all decaying leaves as they occur; stir up the surface of the soil in the pots, to prevent moss and weeds from appearing. In this month, a supply of the different soils, manures, and vegetable mould, should be procured.

T. APPLEY.

FLORISTS' FLOWERS.

ANEMONES may yet be planted, excepting the finest double ones. **ARICULAR** and **POLYANTHUSES**; to delay must take place in putting these into winter quarters, if not already done. Scatter occasionally amongst the pots a layer of very dry ashes, which will absorb the moisture. **CARNATIONS** and **PICOTEES**, finish taking off the layers, and potted them; place them in cold frames, giving plenty of air every day. **DARLINS**, cut down when frost-bitten, and cover the roots with a small hillock of coal-ashes, or take them up at once, and reverse the roots, to allow the moisture to run out of the hollow stem. Number every root, and put them by in a dry, cool place, where no frost can reach them. **FUCHSIAS**, done blooming, prune in, and give no water to, for a month. **HYACINTHS**, finish planting, both in pots and beds. **IRISES**, both *Spanish* and *English*, plant in a rich soil and open situation. **NARCISSUS**, pot and plant out in the beds. **PINKS**, plant out early; fasten firmly, to prevent the frosts from drawing them out. **RANUNCULUS**, buds prepare. *Turban variety* plant in beds and pots, the fine-named varieties do not plant till spring. **TULIPS**, plant on or about the 10th of the month; choose a dry day for doing this. **VERBENAS**, take up and pot, dressing-off the straggling branches; their cuttings shelter from early frost. All **FLORISTS' FLOWERS** in FRAMES and PITS keep moderately dry, clear of weeds, and decaying leaves. Search for SLUGS and other vermin daily.

T. APPLEY.

KITCHEN-GARDEN.

ARTICHOKES, winter dress. **ASPARAGUS-BEDS**, dress; attend to that in forcing, and plant in succession. **BRANS**, plant a good main crop toward the end of the month. **BET** (Red), dig up for storing. **BROCOLI**, lay down or remove to other warmer situations with good balls of earth; take care not to injure their leaves. **CABBAGES**, plant or prick out into nursery-beds. **CARDUONS**, earth up. **CARROTS**, dig up and store, b.; leave or plant out for seed. **CAULIFLOWERS**, prick out in frames, &c., for winter protection, pay particular attention to airing in all fine weather, both hand-glass crops and otherwise. **CELERY**, earth-up in dry afternoons, having the earth all forked up previously. **COLCOWORTS**, plant. **COMPOSTS**, prepare, and always have a supply in the dry for immediate use. **CUCUMBERS**, attend to in forcing. **DRAINING**, attend to where required. **DUNG**, prepare for hotbeds. **EARTHING-UP**, attend to. **ENDIVE**, tie up for blanching or otherwise; pay particular attention to protection. **GARLIC**, plant. **HERBARY**, clean, &c. **HORING**, attend to; on a fine afternoon never lose a favourable opportunity for this or any other kind of work. **HORSEADISE**, dig up, and lay in the prime for use, and replant. **HOTBEDS**, make for salading, &c. **JERUSALEM ARTICHOKES**, dig up and store. **LEAVES**, continually collect into some corner for future use. **LETTUCES**, plant in frames; attend to those advancing. **MINT**, plant; force in hotbed. **MUSHROOM-BEDS**, make; attend to those in production. **ONIONS**, in store, look over; (Potato), plant. **PARSLEY**, plant some in a frame for use in showy weather. **PARSNIPS**, dig up and store, b.; leave or plant out for seed. **PEAS**, of the heat early kinds, may be sown toward the middle or end of the month. **POTATOES**, attend to those in store, or dig up, should any remain out. **RUBBARD**, clear away decayed leaves, and top dress; also pot off any number of plants that may be required for early forcing, to bring into the forcing structure as wanted. **RADISHES**, sow, in hotbed. **SALADY**, dig up and store. **SCORSONERAS**, dig up and store. **SEA-KALE**, pay particular attention to the removing of all the decayed leaves, &c.; top-dressing, covering up with fermenting materials, or other modes of forcing. **SEED**, dress and store. **SHALLOTS**, plant, b. **SMALL SALADING**, sow; sow in hotbed. **SPINACH**, thin, earth-stir, and keep clear of decayed and fallen leaves. **THINNING**, attend to. **TURNIP**, ridge, &c., vacant ground. **TURNIPS**, attend to thinning-out, or hoeing the late sown crops, and should the weather be inclined to set in very severe, any number of turnips that are full grown may be taken up, and stored for winter use. Spading-in is often better than the hoe. Always cover up a little earlier on the appearance of frosty nights. Also look over your Broccoli quarters of a frosty-looking evening. See if any are fit to cut, or if their leaves need to be broken down over the heads as a protection.

T. WEAVER.

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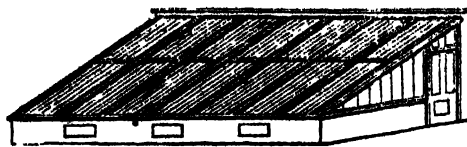
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1852.

TO OUR READERS.

It has been written—

None, if they had power to choose,
(Or I'll resign my charter),
For twenty warmest "How d'ye do's"
One kind "Good bye" would barter.

Now, this may be all very well for a poet, but as Editor, about to commence a new volume, we most emphatically—because truthfully—say, that we shall prefer one cheering "How d'ye do," to any number of the most blandly expressed "Good bye's" that can be given;—in fact, we do not wish to hear one of them. This, however, is a vain wish, for we have had one farewell, and it is so original that we give it entire:—"Why are you going to improve *THE COTTAGE GARDENER*? I am quite contented with it as it is; and I will not be forced to have forty additional double numbers, even for a halfpenny each additional." Well, there is one subscriber irretrievably gone; and we receive even his "Good bye" with regret, for he is a sterling specimen of the nearly extinct race of the venerable Stand-stills, and we are grateful even for his past approval.

However, we have the consolation of a budget of greetings to out-balance this counter-check. A Norfolk clergyman writes thus:—

"Permit me, in fine, to add my humble but sincere testimony to that of thousands, in praise of the work which you superintend. The very valuable information which it imparts so plainly and so practically, is only equalled by the sound lessons of religion which it inculcates. And to see many of my poorer neighbours stealing a peep into its pages, whenever their few leisure moments will permit (for it delights me to give them this little privilege), is a significant proof that it fulfils its mission well. I could wish that, instead of the demoralising trash of infidel journalists so commonly to be found in our village ale-houses, each took in a copy of *THE COTTAGE GARDENER*."

From among our artisan friends, we have this from Halifax:—

"I have been a subscriber to your valuable periodical for upwards of nine months, and have had great pleasure in reading its pages. I first met with it in the library of our respected masters, the Messrs. James Akroyd and Sons, which is free of expense to the work-people, and then became a subscriber, and have continued up to the present, I frequently recommend it among my shopmates; and when they tell me it is too dear, I say, 'It is only the price of a pint of ale, and there is no headache attending it, and you see what is going on in the horticultural and floral world.'"

When, in addition to these onward cheers; we call to remembrance that our aristocratic contemporary, *The Quarterly Review*, says that the contents of our pages are as suitable for the cottage of gentility, with double coach-house, as for that usually tenanted by the labourer, we hope our clerical friend does not express too much when he says, *THE COTTAGE GARDENER* "fulfils its mission well." That it shall continue to do so, no labour, no expense, will be spared; and when another volume closes, we hope to have deserved, and to receive as few "Good bye's," and as many "How d'ye do's," as on the present occasion.

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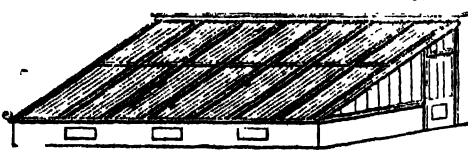
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21 "	3½ " 4½	7 by 5, 7½ by 5½	0 15 0
26 "	4½ " 5½	8 by 5, 8½ by 5½	0 15 0
32 "	5½ " 6½	9 by 6, 9½ by 6½	0 15 0
38 "	6½ " 7½	10 by 7, 10½ by 7½	1 0 0

* Various sizes of 16 oz. Sheet Glass, such as 12 by 9, 12 by 10, 12 by 10, 14 by 10, and 15 by 10, packed in boxes at 1s per 100 feet.

Packed in Crates of 300 feet at 2½d, 16 ounces to the foot, or 14 ounces 2½d.

FOREIGN SHEET GLASS, of very superior quality, packed in cases of 200 feet, and in sizes varying from 36 by 26 to 44 by 30 inches, at 3s, 4s, to 4½s per case.

Milk Pans, from 3s to 6s each; Propagating and Rec Glasses; Cucumber Tubes; Lactometers; Lord Camoys' Milk Syphons; Tiles and Slates; Wasp Traps; Plate, Crown, and Ornamental Glass; Shades for Ornaments; Fern Shades; and every article in the Trade.

HORTICULTURAL GLASS WAREHOUSE, 116, BISHOPSGATE STREET, WITHOUT, LONDON.

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WEEKLY CALENDAR.

M D	W D	DECEMBER 2-8, 1852.	WEATHER FROM LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock aft. Sun.	Day of Year.
			Barometar.	Thermo.	Wind.	Rain in In.						
2	Th	Pipistrelle Bat last seen.	30.267—30.227	41—27	N.W.	—	48 a. 7	52 a. 3	9 13	31	10 13	337
3	F	Pin-tailed Duck comes.	30.285—30.197	39—24	S.W.	—	49	51	10 30	22	9 40	338
4	S	Furze flowers.	30.245—30.224	46—35	S.W.	—	51	51	11 49	23	9 24	339
5	SUN	SUNDAY IN ADVENT.	30.211—30.220	47—39	S.W.	02	52	50	morn.	24	8 59	340
6	M	Black-throated Diver comes.	30.221—30.204	49—44	S.W.	—	53	50	1 0	25	8 34	341
7	Tu	Polyanthus flowers again.	30.202—30.069	51—40	S.	—	54	50	2 22	26	8 8	342
8	W	Skylark flock.	30.214—29.919	54—28	W.	—	55	49	3 56	27	7 41	343

METEOROLOGY OF THE WEEK.—At Chislewick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 47.1° and 36° respectively. The greatest heat, 57°, occurred on the 2nd in 1835; and the lowest cold, 14°, on the 6th in 1844. During the period 85 days were fine, and on 90 rain fell.

TANSEY-LEAVED MACHÆRANTH.

(*Machæranthera tanacetifolia*.)



This is a genus of Composite plants, and belonging to the Syngenesia Superflua of Linnæus. Little is known of it in our gardens. It belongs to the section of the true *Asters*, and was named by Nees Von Esenberg, from *machaira*, a sabre, and *anthera*, the male organs or anthers. The present species was discovered by Dr. Wright, in New Mexico, and from seeds sent by him to the Kew Gardens, it has been ascertained to be a handsome dwarf biennial, with

flowers as large as those of a single China Aster, and much like one; the centre of the flower is yellow, and the ray outside a purplish-blue, but in the bud, the tips of the ray resemble some red thistle just bursting. The leaves look as much like those of the Chamomile as the Tansey. It is a half-trailing, slightly shrubby plant, and will bear exposure in our open borders in summer. *Leaves* alternate, stalkless, slightly downy, cut into numerous, spreading, narrow, toothed segments; these segments become finer on the upper leaves. *Flowers* solitary, and terminating the branches with hemispherical scaly involucre. Florets in the centre, tube-like, and five-toothed. It is figured in the *Botanical Magazine*, t. 4021. B. J.

Propagation and Culture.—It has been stated by Mr. Smith, the curator of the Botanic Garden, Kew, that this novelty is difficult to propagate by cuttings, and that seeds are very sparingly produced. Therefore, the only chance we have of succeeding with it, is to begin very early in the spring, and to give a slight heat to the plant, and as soon as an inch or two of young growth is made, to make cuttings of the shoots directly. There is hardly a plant in this, the very largest order in the vegetable kingdom, that can escape such timely mode of propagation, although there are many of them that defy the art of man to root from cuttings, from the moment the first germ of a flower-bud is formed in the system.

As soon as the young plants are hardened-off; they will grow in any light, rich soil out-of-doors, but in case the seeds should not ripen, a couple of plants should be reserved in pots, and the flowers pinched-off in the bud as fast as they appear. These two plants will furnish a stock of cuttings the following season. Neither the old *Cineraria cruenta*, nor the first *China Aster*, promised so good a chance for garden varieties as this plant. If I were a young gardener, I would not rest until I drove this plant to the verge of a florist's flower. Its very aspect seems to tell as much at first sight. The habit and the leaves seem to speak of carpeting a bed, and the undecided tints of colour speak at once of a wildling got by a chance sport of nature in the wilds of Mexico. Humboldt, however, saw it cultivated there in gardens, although Dr. Wright found it in a state of nature. D. BEATON.

WE have now arrived at the most modern section of our Poultry literature; and we regret that we cannot say that it has kept pace with the improvement which is so decisive in the objects on which it descants.

If any one wishes for a delightful book about fowls, let him buy *Ornamental and Domestic Poultry*, by the Rev. E. S. Dixon. It is not only readable, but most amusing; full of information relative to the history, past and present, of all kinds of poultry, whether useful or only ornamental; sparkling with bright sketches, and even the fragments of practical detail are all touched off artistically. Take this as a specimen:—

"Shortly before the time of hatching arrives, the chickens may be heard to chirp and tap against the walls of their shell. Soon a slight fracture is perceived towards the upper

end, caused by force from within. The fracture is continued around the top of the egg, which then opens like a lid, and the little bird struggles into daylight. The tapping which is heard, and which opens the prison doors, is caused by the bill of the included chick: the mother has nothing to do with its liberation, beyond casting the empty shells out of the nest. At the tip of the bill of every new-hatched chick, on the upper surface, a whitish scale will be observed, about the size of a pin's head, but much harder than the bill itself. Had the beak been tipped with iron to force the shell open, it would not have been a stronger proof of creative design than this minute speck, which acts as so necessary an instrument. In a few days after birth, when it is no longer wanted, it has disappeared; not by falling off, I believe, which would be a waste of valuable material, but by being absorbed and becoming serviceable in strengthening the bony structure, minute as the portion of earthy substance is. And yet some people direct, that as soon as the chicks are hatched, this scale should be forced off with the finger nail, because it is injurious!

"All chicks do not get out so easily, but many require a little assistance. The difficulty is, to know when to give it. They often succeed in making the first breach, but appear unable to batter down their dungeon walls any further. A rash attempt to help them by breaking the shell, particularly in a downward direction towards the smaller end, is often followed by a loss of blood, which can ill be spared. It is better to wait awhile and not interfere with any of them, till it is apparent that a part of the brood have been hatched some time, say twelve hours, and that the rest cannot succeed in making their appearance. After such wise delay, it will generally be found that the whole fluid contents of the egg, yolk and all, are taken up into the body of the chick, and that weakness alone has prevented its forcing itself out. The causes of such weakness are various; sometimes insufficient warmth, from the hen having sat on too many eggs; sometimes the original feebleness of the vital spark included in the egg, but most frequently staleness of the eggs employed for incubation. The chances of rearing such chicks are small, but if they get over the first twenty-four hours they may be considered as safe. But all the old wives' nostrums to recover them are to be discarded: the merest drop of ale may be a useful stimulant, but an intoxicated chick is as liable to sprawl about and have the breath trodden out of its body as a fainting one. Peppercorns, gin, rue, and fifty other ways of doctoring, are to be banished afar, together with their subjects, namely—

'All the unaccomplished works of Nature's hand,
Abortive, monstrous, or unkindly mixed,
Embryos, and idiots, erenities, and friars,
Into a Limbo large and broad, since called
The Paradise of Fools, to few unknown.'

"The only thing to be done, is to take them from the hen till she is settled at night, keeping them in the meanwhile as snug and warm as possible. If a clever, kind, gentle-handed little girl could get a crumb of bread down their throats, it would do no harm; but all rough, violent, clumsy manipulation is as bad as the throat-tickling of the hard fingered hangman. Animal heat will be their greatest restorative. At night let them be quietly slipped under their mother; the next morning they will be either as brisk as the rest, or as flat as pancakes and dried biffins."

Next comes before us *Ornamental, Aquatic, and Domestic Fowl, and Game Birds*, by Mr. J. Nolan, of Dublin, long an amateur breeder, and now a merchant of the birds concerning which he writes. It is a volume containing much information, but ill-digested, and containing more information relative to game than to domestic fowls.

Domestic Fowl, their Natural History, Breeding, Rearing, Feeding, and General Management, by Mr. H. D. Richardson, we have before noticed as a very excellent compendium of previously published information; and in its last edition it has been revised by a practical farmer.

Lastly, we have—*Fowls: a plain and familiar Treatise on the principal Breeds*—by Mr. John Baily, the well and favourably known poulterer of Mount Street, Grosvenor Square. This little work is a third edition of his pamphlet on his great pet, "The Dorking Fowl," with the addition of some excellent and useful information relative to other varieties. We have room only for one short extract, and no room to enter into a detail of the reasons why we differ from some of his opinions.

"The real Hambro' fowl is a beautiful bird. There are two sorts, the golden and the silver; they differ in one respect only, the foundation colour of one is white, the other yellow; one description will serve for both. They have bright red double combs; clear hackles, either white or yellow; bodies spotted or pencilled all over with black; taper blue legs, and ample tails. Their carriage is gay and proud; their shape, symmetry, and their appearance is alto-

gether indicative of great cheerfulness, and carrying an air of enjoyment, which always prepossesses in their favour.

"The plumage of the cocks differs somewhat from the hens: they are very little speckled, if at all, except while chickens, when the wings and hinder parts are marked, but this seldom lasts after the first moult. In the silver variety, the cock is almost white, having sometimes a chestnut patch on the wing, and towards the tail some black spots, but these disappear as he gets older. The tail is invariably black, but the sickle feathers are tinged with a reddish-white, and in the golden cock they are shaded with a rich bronze or copper. The cock of the golden is red all over, and both have well-defined white deaf ears.

"The great virtue and merit of these fowls are, they are prodigious layers, and this is not brought about by any undue feeding, but it is their nature. They are said never to set, and, as a rule, it is true of them; not one in a thousand deviates from it; but when I lived in Davies-street, I had one at liberty, she stole a nest in a lumber-room, and brought out a brood of chickens.

"They are excellent guards in the country, for when disturbed in their roosting-place, they are the noisiest of the noisy, and nothing but death or liberty will induce them to hold their peace. I think I may say with truth, they lay twice as many eggs as any others.

"In these, as in other breeds, erroneous ideas and names have crept in, some being correct descriptions of the same fowl under another name, but others being imaginative, so far as real Hambro' fowls are concerned.

"The Bolton Bays and Greys, and Chittipats, are identical with the Hambro'. I have also seen so-called Turkish and Creoles, which were the same.

"As a general rule, it may be observed, no true-bred Hambro' fowl has top-knot, single comb, white legs, any approach to feather on their legs, white tail, or spotted hackle.

"I know no bird that gains so much by change of climate as this does; the British bred are infinitely better than the imported."

In conclusion, we have to observe, that one great deficiency more or less detracts from the value of all the publications we have passed over rapidly in review—they are not original works. They do not place before us facts stored up by the authors, or by their friends; but they retail, again and again, what their predecessors had borrowed before, and that without sufficient knowledge to select ancient truths—always valuable—but republishing them with equally ancient errors. Mr. Baily's volume claims exemption from this condemnation; but this very exemption proves the correctness of our judgment. Mr. Baily has confined himself chiefly to a statement of his personal experience and observation, and the result is a thin duodecimo of 58 pages.

We might proceed to remark further upon the great deficiency of knowledge, often mixed up with the practice of gross ignorance, relative to the diseases of fowls, which are markedly apparent in all the volumes we have enumerated; and added to these deficiencies are most imperfect arrangement, and the absence of good facilitators to reference. These defects are very extensively felt, and, combined with the wide, and more widely-growing, attention now paid to poultry, they have induced several of the best breeders of poultry to contribute the results of their experience, so as to form what we believe will prove to be the most trustworthy work on poultry that has hitherto appeared. It will be published in five or six cheap and highly-illustrated numbers, and the first of those numbers will appear in January next.

COVENT GARDEN.

We shall now proceed, as we promised last week, to furnish our readers with a list of the fruits which we would recommend for planting, in the manner we spoke of in our last report, and to make such observations on each as may be necessary, and as our limits will admit of. In making the selections we speak of, the main object we have kept in view, is the applicability of the varieties to the generality of soils and situations, there being none of them, so far as our experience goes, which are remarkable, either for delicacy of constitution, or as capricious in their character. It will be observed, that we have avoided many of the popular varieties, such as—Ribston Pippin, and Golden Pippin, and have even introduced some, the very names of which many of our readers have never heard: yet, nevertheless, we feel confidence in what we are doing, because we are writing from experience; and although we are deviating from the beaten track, and not recommending those only, which everybody else recommends, our readers must not be the less relying. We may as well state, that the reason why we do not recommend the sorts we have mentioned, and some others which are well known, is because they are not suited for general cultivation, on account of either requiring peculiar soils, or being naturally of delicate constitution. We shall begin first, with twelve of the best dessert varieties, and then twelve of the best adapted for culinary purposes. In both cases we shall take them as to their season of maturity, beginning with those that are earliest ripe.

1. *Early Harvest*.—This is originally from America, and one of the few which succeed in this country. It is a most delicious early dessert apple, of medium size, and possessing a flavour almost equal to an imported Newtown Pippin. It ripens at the end of July, and beginning of August. The earliest native apples we have, are the loameting and Margaret, but in point of size and flavour, they are not to be compared with the Early Harvest.

2. *Devonshire Quarrenden*.—Who is there, who, in early autumn, has enjoyed the rich, refreshing, vinous juice of the Quarrenden, and would not give it a place in his orchard? It is a strong, free-growing tree, an abundant bearer, and will grow almost anywhere. The fruit is ripe in the first week of August, and continues in use during the whole of that month, and the greater part of September. About the same season, but its first ripening is considerably later, we have the

3. *Summer Golden Pippin*.—A very delicious, early Apple, which ripens in the end of August and beginning of September, but does not keep much over a fortnight. This is a very first-rate variety, and prepares the way for those yellow and firm-fleshed, rich and sugary sorts, which show themselves later in the season, such as

4. *Kerry Pippin*.—This variety is now in pretty general cultivation, and, if we may judge from the quantities which are brought to market, and the prices they fetch, we may safely say it is one which has passed

the ordeal. It is certainly one of the richest-flavoured dessert apples we have. It ripens about the second or third week in September, and lasts till about the middle of October. All we need say in commendation of the Kerry Pippin is, that every one who has not got it should get it.

5. *Scarlet Croston*.—We are coming now to what may be properly called autumn and winter apples, and we do not know of one better suited to succeed the Kerry than the Scarlet Croston. It is a medium-sized, flattened fruit, of a peculiarly rich and sugary flavour. It ripens in October, and continues in use till December, with a very valuable property of not becoming mealy.

6. *Court of Wick*.—Although this is now generally grown in all well-assorted gardens, it has not received that attention from the orchardist which it ought. It is one of the best, as well as one of the most beautiful apples in cultivation; and while, by some, it is considered equal in flavour to the Golden Pippin, the tree is both more hardy and healthy than that variety, and will even succeed in soils where some sorts would not grow. It is in use from October to March.

7. *Downton Pippin*.—This is one of the Golden Pippin family, raised by T. A. Knight, Esq., and a most excellent dessert apple. The tree is a healthy, rather robust grower, and an abundant bearer. The fruit is ripe in November, and continues till January.

8. *Golden Reinette*.—Almost everybody knows the Golden Reinette, or ought to know it. It is an old English apple, and one of very fine quality. It is well adapted for orchard planting, as the tree is a vigorous grower and a very abundant bearer, but does not attain the largest size. The fruit is in use from November till April.

9. *Pitmaston Nonpareil*.—A richly flavoured and highly aromatic apple, which was raised by Mr. Williams of Pitmaston. It is in use from December to February.

10. *Wyken Pippin*.—A very fine, tender-fleshed, juicy, and richly flavoured dessert apple, which is in use from December to April. This should be in every collection.

11. *Boston Russet*.—This is another of the few American apples which succeed in this country to any degree of perfection; and it is certainly one of the best of our winter dessert apples. It possesses all the flavour of the Ribston Pippin, and the tree, though not large, is very hardy, and an abundant bearer. It is in use from January to April.

12. *Sturmer Pippin*.—Of all we have as yet enumerated this is, perhaps, the most valuable; not because it is superior in quality to any of the others of its season, but because it keeps longer than any other variety. It is of the richest flavour, being that of the Ribston Pippin and Nonpareil combined; and its season is from February till June.

We have thus completed the circle, and brought our readers round again to the season of the early harvest with which we started. By such judicious modes of planting, Apples of the greatest excellence may be had

throughout the year. It must be borne in mind that some of the varieties we have mentioned are not, from their habits, adapted for the purpose of which we have been treating. It will be necessary, therefore, to have them grafted standard high on strong growing varieties, which make strong straight stems.

We find our space too limited this week for the culinary varieties, but shall continue the subject in our next. We shall now proceed to note our observations in the market during the week. FRUITS still continue plentiful. That fine cooking apple the *Dymelow's Seedling*, or as it is sometimes called *Wellington*, begins to come in and meet with a ready sale at 4s. 6d. to 5s. per bushel. *Winter Pearmain*s have also made their appearance. This is one of the oldest apples on record, and can be traced back to the reign of King John, at which period it was in large cultivation in Norfolk. What would Mr. Knight say to this in support of his theory? We shall speak of this variety next week when noticing the culinary varieties. We have not observed anything new in the way of apples during the week, besides what we noticed in our last. In PEARS there are some very fine *Glout Morceau* and *Passe Colmar*, together with a few *Nelis d'Illiver*, but we shall have occasion to speak of these when giving our list of select varieties for orchard planting. The prices which these are making are from 3s. to 4s. per dozen.

IN VEGETABLES there is no scarcity, notwithstanding the great damage which was done by the recent high tides in the garden-grounds about Fulham. One of the largest cultivators informed us a cheque for £500 would not cover his loss. His men were actually navigating the grounds in boats.

PLANTS AND FLOWERS are much of the same description as have been in the market for some two or three weeks past, consequently we need not enumerate them. But, for the information and gratification of our lady readers, we must record the construction of a very beautiful *Bouquet*. The centre was formed of a very fine Double White Camellia, round which were set, in a concentric circle, a Double White Camellia and a cluster of Scarlet Geraniums alternately, five of each; between each White Camellia there were three flowers in a cluster of a very beautiful azure blue *Cineraria*, of a peculiarly rich and lustrous hue; the whole was fringed round with fronds of some small-growing fern, and encircling these a margin of lace paper. It was the most beautiful bouquet in the market.—H.

GOSSIP.

EAST, West, North, and South, we are right glad to find that *Poultry Exhibitions* are being established. We have before us prospectuses for one in Wales, at *Hay*, on the 16th of December; for one at *Salisbury*, on the 13th of the same month; for one at *Hythe*, in Kent, but the day not fixed; and for one at *Dublin*, on the 8th and 9th. We repeat, we are right glad of this, for it is for the encouragement of a species of stock that may, and ought to be found around every cottage, even

in greater perfection, than around the farm-house and the mansion. But, whilst we rejoice over this extension of Poultry Shows, we would strongly protest against the abuse of them. We have no idea of their being held for mere gain to the parties establishing them, and it is only a still worse feature, if that gain is intended to be obtained by the sale of eatables and drinkables by some neighbouring innkeeper. We yield to no one in the desire to have a metropolitan show, but we do not recognise, as worthy of such a character, either that at Hitchin, or the proposed one at Kennington Oval. We are led to suspect that the latter has the gain we deprecate for its object, and at all events, the originators of both the shows in question, took not into consideration, before they issued their Prospectuses, either the welfare of the poultry, or the interests of the exhibitors. Who that has a just regard for his fowls, will send them from home for a week, five days of which they are to be perished up at the Exhibition? We know of more than one of the best breeders, who would not, on this account, send them to Hitchin, and we know of a still greater number who will withhold their specimens from the Kennington Oval, on the same account. They have acted wisely for their own interests, and humanely for their fowls, by so doing, and we hope that no future exhibition of them will be kept open for more than two days.

We are informed that *Lord Calthorpe's Small Garden Tenants*, near Birmingham, about 150 in number, have formed themselves into a Horticultural Society, and intend to have a show of flowers and vegetables, and we hope fruit is to be included, twice a-year. We shall be glad to aid this and all such societies.

A subscription for *Professor Von Eisenbeck*, whose penury and distress we mentioned in our last number, has been opened, and a remittance already forwarded to him to rescue him from immediate want. Any donation, however small, may be sent to Mr. Edward Newman, Devonshire Street, Bishopsgate.

As long since as 1811 a plant was introduced from North America, that had been still earlier known to the Canadian boatmen as the *Pomme de Prairie* (the Apple of the Prairies, or Plains). They eat its roots, either boiled or raw, these roots being nutritious and insipid, but of a solid texture, and not among the most easily digested foods. To botanists the plant is known as *Psoralea esculenta*. Another recent attempt has been made to introduce it into cultivation as a substitute for the Potato, but we fear that it will not succeed in any available mode. We speak of it as another attempt, because a very few years since its culture was tried in England; and the present attempt is being made in France by M. L. Picquot, No. 11, Rue Guy-Labrosse, Paris, who has called the plant *Picquotiana*.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us

additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

CALEDONIAN (Inverleith Row), Edinburgh, Dec. 2.
LONDON FLORICULTURAL (Exeter Hall, Strand), Dec. 14+.
SOUTH LONDON (ROYAL), Dec. 9+, 16.

POULTRY SHOWS.

BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
BRISTOL AGRICULTURAL, December, 7th, 8th, and 9th. (Sec. James Marmont.)
CORNWALL (PENZANCE), January 10th, and 11th. (Sec. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)
HONITON, January 12th. (Sec. H. K. Venn.)
SALISBURY AND WESTERN COUNTIES, December 13. (Sec. T. Pain, Esq.)
WINCHESTER, December 1st. (Secs. G. W. Johnson and J. Colson.)

† For seedlings only.

PINE-CULTURE: THE HAMILTONIAN SYSTEM.

(Continued from page 122.)

We will now look over Mr. Hamilton's notes, his book, &c., to see if anything has been omitted, or if anything material can be added. Our remarks must, of necessity, assume a desultory character; but they will not be without their use. We will discuss the following heads, alphabetically arranged to facilitate reference: anything which may occur afterwards may form an appendix:—*Atmospheric moisture, Bottom-heat, Composts, Disrooting, Errors, Foliage, Kinds, Longevity, Main principles, Moisture, Old stools, Planting out, Pipes, Root-culture, Recipes, Ripening, Soil, Structures, Suckers, Syringing, Temperature, Ventilation, Watering.* It will, as we think, be far better thus to examine principles, than to give a mere detail of practice, however sound. The essentials once fixed in the mind, a sound practice must necessarily follow.

ATMOSPHERIC MOISTURE.—Here we have one of the most important of all the headings. No plan of Pine-culture can succeed which does not provide a liberal amount. Exceptions there may be at such periods as that of the ripening, but they can be only in degree, and through the successive character of the fruit, not readily practicable. But it is worthy of remark, that some respectable pine-growers think that Mr. Hamilton, in his ardour to produce a vast amount of fruit from a narrow compass of glass, has ridden his hobby a little too hard as to air-moisture in his winter management. We do hope for pardon from Mr. H. whilst we, as a duty, observe, that as a close, warm, and damp atmosphere doubtless favours the enlargement of the Pine, it in like measure favours the enlargement of the crown; and a large crown is neither admired by the table-decker, nor by the pine-purchaser. We would here beg to interpose a hint, and that is, that with no class of plants with which we are acquainted, can the relation of light, heat, and moisture, be a matter of indifference. Winter in Britain is dull, if not dark; therefore, the high-forcing principle is not Nature's way of Pine-culture. Doubtless, we may take some liberties; but caution is requisite; and common sense, though not very romantic, is sometimes exceedingly useful as a guide in difficulties. We say, therefore, so manage your system as that you can at any time supply any amount of atmospheric moisture, and as speedily remove it if needs be; but we must pass briefly to other main points.

BOTTOM-HEAT.—What fearful reminiscences may this very heading bring to the memory of every King of

Spades whose hair has become bleached in the service! How many root burnings, as well as heart burnings, may be called to remembrance? Mr. H. says (p. 55), "Newly potted plants will be benefited by a heat of about 90° for two or three weeks; after which time it may fall to 85° max. and 80° min.; but in the winter 75° will be sufficient for successions. The bottom-heat required for those plants which are to produce several fruits from the same plants ought to be as equable as possible, at a medium of about 80°, and not to fluctuate more than 3° above or below. However, I have known a plant to swell well in the summer in a bottom-heat of 70°; but in winter, when the superincumbent air is kept cooler, the plants that are swelling their fruits will make but little progress except the bottom-heat be about 80°." We may here caution young beginners against the erroneous idea of going a-head by means of extreme bottom-heats: we advise them not to exceed 85° on any account, until they quite understand the habits of the Pine. We saw some of the finest grown Pines in England, this summer, at Alnwick Castle gardens, the seat of his Grace of Northumberland; gardens kept in capital order by Mr. Pillans, the head gardener. The bottom-heat to these Pines could not have been above 75°, and the pots only half plunged, Mr. P. preferring to depend on a pot full of robust roots, to any extra attempts at stimulating the vital action of the plants.

COMPOSTS.—At p. 7, Mr. H. says, "With regard to rich composts, I mean not to dispute their efficiency; I can assure the public, however, that the Pine will flourish well without them if the system of root and atmospheric moisture here recommended be adhered to: water and air, there can be little doubt, constitute the principal food of the Pine-apple." These are strong views, and no doubt, in the main, correct; but it is well known that some of our best pine-growers use liquid-manure, and this we think by far the best form of manuring; for the admixture of manurial matters in the soil has a tendency to hasten the decomposition of the organic matter; and we do think that on the long preservation of this depends, in a great degree, that longevity in the roots which Mr. H. takes as the basis of his system. See heading "*Longevity.*" Mr. H. has, since writing his very useful little book, stated to me by letter, that he considers a good loam, rich in vegetable fibre, complete in itself for the culture of the Pine; and we recommend the opinion to our readers.

DISROOTING.—This, about which so much fuss was made in our laddish days, is now entirely repudiated by all good gardeners, and is only justifiable when plants have received abuses, injuring or destroying their roots; or in case the soil in their pots has become what is technically termed "sour." For further notice, see "*Longevity.*"

ERRORS.—We merely take this in its course to direct attention to one or two which have somehow crept into our remarks; they will be corrected in the conclusion.

FOLIAGE.—Those who watch the evidence in this Pine case will remember Mr. H.'s dry way of defending the poor unoffending foliage. "Be as careful," he says, "of cutting the foliage as you would of cutting your corns." This language, although not remarkable for dignity, is highly emphatic. At p. 63 of his unmistakable little book he says, "No destroying nor shortening healthy leaves," &c. Would not the late Mr. Knight, of Downton, have rejoiced to find that his deep diving into Nature's secrets had not been in vain; that the very class of men who were best able to appreciate high principles (and, perhaps, least fitted to seize them at one period through the giant-like tyranny of that hard slave-driver, prescription) had entered into his labours. Let then, we say, no man cut away a leaf of a Pine until he can show a sound reason (not fancy) for so doing. Mr. H.

very valiantly contends for the astounding longevity of the Pine roots: why did he not say that the foliage was barely second to them, in that capacity? Those who desire to look further into this matter may just refer to pages 37, 64, and "Address," p. 6, of Mr. H.'s edition of 1846.

KINDS.—There are, perhaps, some sixty varieties or more in this country, but the principal kinds grown are the Providence, Queen, Enville, Jamaica, and Cayenne. Mr. Hamilton's planting-out system has been principally confined to the Jamaicas, Queens, and Providences; though, we think, he has not cultivated the last to the extent of the two former. He says, "All the Queens, except the old variety, are well adapted to my system. The old Queen is apt to breed too many suckers." In another place he says, "I like the Queens best for quantity of fruit." What the Cayennes may prove under this system is not well decided; but it must be kept in mind that the Jamaica is the most valuable as winter fruit; the Queens then become insipid.

LONGEVITY.—It was formerly considered that the roots of the Pine possessed no vitality worth consideration beyond a year or two; but the fact was, gardeners generally contrived to shorten the days of the roots by bad culture. Mr. H. says (p. 6, 2nd edit.), "It has, however, been established, by the results of many years practice at Thornfield, that one Pine plant is capable of producing one or more fruit annually for any period of time." Again, p. 49, "I had remarked that all the largest fruit, but more particularly the Enville and Queens, were produced from those plants which had been the longest potted previous to fruiting." Mr. G. Jennings, of Knowsley, the seat of Earl Derby, and Mr. Fleming, of Trentham, have, he says, adopted his ideas; Mr. J. has produced splendid results, and Mr. F., it seems, has, in a public print, pronounced Hamilton's system to be the best; this mode of culture, as before observed, being based principally on the longevity of the roots. There can be no question, it appears, that those minute fibres, scarcely visible, and which ramify with age in all directions, penetrating drainage materials, and every lump of turf or soil, possess vast absorbing powers, and that of a continuous character, if totally undisturbed. These were despised in former times; our old cultivators could only recognise those lusty white roots which the Pine makes up the stem, and to obtain which, disrooting and other tricks were had recourse to. Those who understand the culture of Orchids will very well understand the position of this question. We do not expect to find our friend Appleby disrooting and leaf-stripping his huge specimen Cattleyas every year, unless it be to make a five pound plant into a ten-pounder, by cutting ten slices at a pound each.

MAIN PRINCIPLES.—These, in the abstract, may be thus summed up:—1st. A secured air-heat adapted to the season: summer, 75° to 85°; winter, 60° to 70°; other periods about intermediate, principally ruled by the amount of light. 2nd. A certain and little fluctuating bottom-heat, bearing a close relation to the air-heat, in summer about 84°, winter about 75°; other periods principally graduated according to the demand on the foliage through light and heat. 3rd. Atmospheric moisture at all times in proportion to the amount of heat. 4th. A liberal ventilation without sudden checks, on principle for the purification of the air, and as an expedient to redress extreme heats. Lastly, undisturbed root action, in a proper and long-enduring medium. Now this is simply an epitome of all the rest, and to knowing pine-growers may seem superfluous; but as these papers profess to set the matter on a plain footing to a rising generation of pine-men, we feel that the matter cannot be set in too strong a light.

MOISTURE.—Here we have air moisture, and root moisture; two very different affairs. The former can

hardly be supplied in a too liberal way by any of the ordinary means, provided heat and a free ventilation be concomitants. As to root moisture, little is needed by the Hamiltonian mode. Mr. H. writes thus as to an inquiry about watering—"I have watered at the root twice this summer." It must be observed here that the plants are out of pots; their immoveable fibres seizing on and investing all kinds of material in the bed, soil, turfy matters, and even, no doubt, the very stones, debris, &c., &c., attached to which they have a proper feeding ground, an exemption from dangerous extremes, and, doubtless, collect food continually from the gaseous matters by which they are surrounded; the latter brought into play by heat and moisture.

OLD STOOLS.—Mr. H. is all for planting clean stools, if to be had, in preference to young plants, unless the latter are exceedingly strong. He, however, shows that, although Mr. Knight, of Downton, used old stools, that they were in error in totally disrooting or shaking the soil from the roots; "by which practice," he says, "I have discovered the plants will frequently make a long growth before they fruit." Our readers will here see the importance of planting such stools out without disturbance. "If," he adds, they cannot be had with roots and balls, there need be no hesitation in planting them without at once into the compost, where, if handled according to the directions in his book, he will guarantee them to produce first-rate fruit the first year. He adds, "They may be planted at any time."

PLANTING OUT.—This heading is almost a repetition of the former. We will, nevertheless, take this opportunity to suggest attention to the modes described in an earlier paper, viz., that twenty inches of soil is enough, and that the pipes be covered with broken bricks three inches, also three inches between; the pipes will, consequently, be fairly imbedded in bricks or rubble of some kind. And here, one remark. Any one about to commence might fancy the soil would get too dry without some provision for water; but such is not the case it appears: Mr. H. solidly affirms this. Indeed, the following extract from a recent letter will show how this stands: "You seem surprised about the 'Chamber' affair. I have dispensed with them everywhere, or nearly so. I have proved the beneficial effects of covering the pipes with rubble (instead of chambering) for twenty years, and never found any inconvenience from the soil getting caked or dry. I should be cautious of laying anything that is a non-conductor between the rubble and the soil. The rubble at the top may be covered with rough gravel, the fine sifted out."

In another paper we shall probably finish the Hamiltonian system. R. EMMINGTON.

BULBS.

(Continued from page 142.)

Alströméria Hookeriana, alias *rosea*.—This is a beautiful dwarf species, and one of the hardiest of them, keeps its leaves the whole winter in the open border, unless the winter is very hard; and if the tops get killed it is the first of them which is above ground in the spring. It will grow in the very richest kitchen-garden soil; but the front of a vinery, where the border is well drained, is the place it likes best. It is also a good pot-plant, as the leaves and flower-stems are more rigid than any of the rest—besides being dwarf, like *pulegra*. The colour is difficult to describe: *rosea* was a bad name for it, as one-half of the flower is not rose colour; the points of the petals are greenish, then rosy, the bottom of the upper or back petals are light and full of streaks and speckles, with a shade of yellow between the white and rosy parts. It will not cross with *peregrina*, *pitcairnia*, or *aurea*.

A. peregrina (the Foreigner).—This is the oldest of

the genus under cultivation. It was gathered along with a few more of them by a Frenchman named *Feuillet*, who first introduced them. *Linnaeus* named them for the Frenchman, and founded the genus on *peregrina*, but, by a misprint, it is called "*pelegrina*," in *Feuillet's* book; and in the *Cottage Gardeners' Dictionary*; also in every list of them, but one, that has appeared in the old or new world from that day to this. Dr. Herbert corrected the error, however, in 1837. *Peregrina* means "a foreign lady," and it is evident that *Linnaeus*, who was fond of joking, gave a feminine termination to Baron *Alström's* name, purposely to suit *peregrina*. It is one of the best pot-plants among them, and is hardy enough to live in a border or cold pit, if the border is slightly covered during frost. There is a garden variety of it with white flowers, which does better in a pot, and *Cumming* found a greenish-white variety of it near *Valparaiso*; still it is not easy to get it to cross with others, and the white one does not always come true from seeds.

A. paillucina (Parrot-like).—This is the next tallest and hardiest after *aurea*, and will grow and flower in the open border in any good garden soil. The flowers are dull red, with green tips and black spots. This came out in 1829.

A. pulchella (Pretty).—Orange and red, approaching to scarlet. For many years this was considered a distinct species, and, as such, it was figured in all the *Magazines*; but now it must fall into *Van Houtte's* Ghent varieties along with another called *Simsii* or *Simsiana*. They are all from a common type—*hamantha*, and any one may run them into endless varieties. Since I wrote about *hamantha* (page 142), I have learned that *M. Van Houtte* denies a hybrid origin to his seedlings, but that he had them from wild seeds—which only proves that the seeds were gathered in South Chili, where *Poeppig* states that he found *hamantha* in meadows near *Antuco*, running into all shades of red, orange, lemon and white. Another, called *pilosa* in the "*Botanical Register*," is one of them. All these varieties make a gorgeous bed planted together, and are as easily managed as so many common tulips or hyacinths, only that the roots ought to be taken up every other year to prevent their going too deep in the bed.

A. pulchra (Fair).—This is the last in our enumeration of them; it was first figured in the *Botanical Magazine*. It is called *tricolor*, in *Hooker's Exotic Flora*, and *Flos Martini*, in the *Botanical Register*. *Cumming* found it near *Valparaiso*, and it appears to have a great range in Chili, according to the other travellers. When I was collecting the species, many years ago, I found two or three seedlings of this at Mr. *Loddige's* Nursery, at *Hackney*; they were a dirty white, with green tips, and not worth much, but proving how much they are given to sport. *Tricolor* is a better name than the true one, but it has four distinct colours, if not five—a white or light ground, streaked with purple, red and green tips, with a dash of yellow across the petals. It is quite as hardy as the rest of them, and is well adapted for pot-culture. I once had a beautiful bed of them, a circle, planted thus—a large mass of *aurea* in the centre, then a row of *paillucina*, round that *hamantha*, and some of *pulchra*, and *peregrina*, in one row, for want of a good stock of them, with a border of *Hookeriana*: this bed I afterwards turned into a basket-form, by planting a row of *Bomarea acutifolia*, and *hirsella*, or *ovata*, as some call it, quite round the sides; the bed was three feet deep, and nearly one-half of quite rotten leaf-mould, with a soft yellow loam. The two *Bomarea's* grew ten to twelve feet in this, and were trained round and round, and at a height of eighteen inches, on sticks with a handle of hazel rod

across, on which *acutifolia* was trained from both ends. This bed was much admired, but now, by using the best of the Ghent seedlings, along with *aurea* and *paillucina* in the middle, a splendid bed, of any shape, might be made much easier, and I can vouch for it, that if it was hedged with these twining *Bomarea's*, planted also eighteen or thirty inches, so as to get a thick mass of them, they would much improve the bed, and be in character too, besides the novelty of the thing; for I am not aware of any one else having ever used them so. I may remark, that almost all the *Alströmarias* are natives of Chili, and that out of forty *Bomarea's* described, none were found in the whole of Chili, but two species. The rest are natives of Peru, and northwards into Guatemala and Mexico.

Amaryllis.—Since this genus was printed for the *Cottage Gardeners' Dictionary*, strange relations respecting it have appeared, which overthrow both Dr. Herbert's arrangements, and that by Dr. Lindley, in the *Vegetable Kingdom*. The greatest amount of practical knowledge on one side, and consummate philosophy on both sides, were not sufficient to bear the natural test of a true arrangement. In the *Amaryllidaceae*, the greatest point of difference by which *Amaryllis*, and other allied genera are kept asunder, is a solid flower-stalk, or a hollow one. So many genera have the flower-stalk hollow, or pipy, and so many the reverse. According to Dr. Herbert's ideas, a bulb with a solid flower-stalk or scape, could no more be crossed with one having the scape hollow, than with "an oak-tree."

In the *Vegetable Kingdom*, the true *Amaryllids* are also divided into two sections, the point of difference being the cup or coronet, peculiar to many of them, as the cup inside the flower of a *Narcissus*. All *Amaryllids* having this cup in the flower are in one division, and those of them wanting the cup in the other. Two very simple and convenient arrangements, but they are not natural, neither are the genera in them placed according to their natural affinity. In both, *Amaryllis* is placed far from *Vallota*, and in both, *Vallota* is kept much asunder from *Brunsvigia*, yet the three ought to stand side-by-side, and be followed by *Cyrtanthus*. Dr. Herbert could not cross one species of *Brunsvigia* (*multiflora*) with *Amaryllis*, therefore, he thought *Brunsvigia* might "yet be upheld." But in New South Wales, where all the *Brunsvigias* and *Amaryllises* cross freely, the cross seedlings from *Brunsvigia multiflora* are the most showy of all, as we might expect. The gentleman who effected this cross with whom the plants first flowered in 1847, tells us (*Gardeners' Chronicle*, 1850, 470), that as many as from twenty to forty flowers were on a single scape, and that the "colour is generally like that of *Passiflora kermesina*." And at home I have put the union of *Vallota*, *Cyrtanthus*, and *Brunsvigia Josephine*, beyond a doubt. If Dr. Herbert was alive, he would be the first to acknowledge the necessity for re-arranging of the genera afresh, and this explanation was necessary at the outset, in order to remove doubts that might naturally be entertained against such and such crosses as I shall suggest here and there in these papers on bulbs. I have no wish to change a single name; it is more convenient to hold on as we are, as we do with *Azalea*, *Rhodora*, and *Rhododendron*. All that I claim is, a fair hearing, because I have now no means of pushing such experiments myself.

Amaryllis Belladonna.—This is the best known of all the family; and whatever we may think of the soil in which it is found growing at the Cape, there is no doubt but it likes a good rich soil and an open air treatment in this country. I never saw it growing in a pot half so finely and so vigorously as it does in the open air. Miller's compost for it is as good as any that has been tried since; at two feet deep, after draining the border,

he mixed a quantity of rotten dung; after that he put a foot of rich garden loam, planted his bulbs, and used a lighter soil on the top, the bulbs standing six inches deep. We have seen lately how beautifully they get it to flower at Claremont under similar treatment, and a change every sixth year. I have also seen it flowering well with the bulbs nearly out of the ground, in a very rich border. It increases fast from off-set bulbs, but does not seed freely, or but very seldom in this country. In Australia it seeds freely enough, and the cross seedlings from it there would be a great acquisition in this country, particularly the crosses from the pollen of *Brunsvigia multiflora*; and there is no reason why it should not sport there as *Hippeastrum* does here. *Belladonnas*, and all other bulbs which grow in winter and rest in summer should not be planted in *mixed* borders, nor where the roots of large trees or bushes can reach; the latter will suck away the goodness from the soil; and growing plants require water in summer; and these *Amaryllises* are better in the dry while they are at rest. There are two varieties, one of them paler; and the third species mentioned in the *Dictionary*, *Blanda*, is not in any public collection in this country, as far as I can learn. When I come to the other sections of the genus, I shall speak of the best mode of treating a whole collection of them; but, as they are now pushing out of the ground, I may remark generally, that they require air constantly, and large doses of water from the time the leaf is two inches long; and if they are in pots it is better to water them from below by a saucer full of water, now and then, but not constantly; say as much as the soil can take up in a couple of days; then take away the saucer for ten days or a fortnight.

There is a scarce little bulb, called *Cyrtanthus uniflorus*, *Gastrenama clavatum*, and other names. It is a true *Amaryllis*, and so are all the *Cyrtanthus Brunsvigias*; and there is little doubt but *Strumaria* and *Hesaea* are also true *Amaryllises*—at any rate they require the above treatment at this season, as well as all other half-hardy bulbs that grow in winter.

ANDROCymbium.—There are three species of this little-known genus in our *Dictionary*, but they are not worth while for their beauty, only as botanical sections, or curiosities; that they require sometimes to illustrate lectures and so forth. Their flowers are small and dull, greenish white.

ANISANTHUS (see *Antholyza*) from which Sweet divided them upon grounds not now recognised by botanists.

ANTHERICUM is on any list, but there are no bulbs in it, and therefore I shall pass it, although botanists make it a section of the lilies; at best they are only *Asphodels*.

D. BEATON.

(To be continued.)

VIOLETS.

In this age of glitter, it is something to find that worth, however retiring, is not always passed by and forgotten. The brilliant rivets the attention, and affords full play to a buoyant imagination. The good is more securely enshrined in the recesses of our warmest affections. Insensible though the world be to merit, I believe it is hardly so black a transgressor as many aspirants for distinction would have us believe. But to win the approbation of the world the merit must be real—no plated, gilded thing will long pass muster. And, again, the merit must be free from alloy, not associated with the impure or the revolting. Then we will freely own that the greatest worth is not always conjoined with the greatest show, and that there are many bright deeds, and many bright things in this world of ours, which are but little noticed by a dreamy philosophy.

Would any reader enjoy a quiet insight into men

and things, let him, in an hour's leisure, glance over the advertising columns of a daily newspaper, or even of those connected with our own humble serial. What a satire at times upon vanity and upwardism! What an unfolding, in general, of prevailing wants, tastes, and aspirations; and, above all, what joyous hopes infused, frequently, for the future. Advertisements will appear just as long as they suit a purpose. Between the line of the beautiful in nature, and the appreciation of the lovely in morals, there is a close connection. Every advertisement, therefore, respecting the gorgeous in flowers, speaks of a refining influence healthily spreading. Every statement announcing where superb violets are to be procured, declares not only that the same bettering influence is being felt by the humblest in society, but also, that if not the *already* and the *now*, the period is *nearing*, when true worth, however retiring, whether among plants or men, shall receive its due meed of approbation. Who can forget emotions of the past, associated with a single bloom of the lowly violet? Who has traversed the brakes and hedge-banks of society without discovering there, again and again, many of the noblest virtues that adorn humanity?

Several inquiries having lately been made on the general management of these much-prized plants, our Captain Editor has wished me to have "my say" on the subject of violets, although I have, in one of our earlier volumes, already noted the main points of management. Referring back might not, however, suit some subscribers, and, as at present I cannot lay hands upon the paper myself, readers will have the advantage of any changes of practice that have been suggested since then. The kinds or varieties will be mentioned in rotation, according to the estimate formed of them, and their early autumn, winter, and spring blooming.

1. NEAPOLITAN VIOLET.—This I still consider to be worthy of a first place, both on account of the size and sweetness of its lilac flowers. There is one disadvantage connected with it, namely, that it seldom does any good out-of-doors, unless in a very dry and sheltered situation, and even there they will be late. A conservatory, or a glass-covered pit or frame is the place for it in winter. For this purpose young plants are best.

Propagation. This is effected by runners and divisions. First. *By Runners.*—These, if wanted, may be allowed to grow in spring, but at no other time. They may be cut off when three inches in length, and inserted in sandy soil, under handlights, on a slight hotbed in March and April. When well rooted they should be planted out in a nice mellow border, about eight inches apart. Second. *By Division.*—This mode involves least trouble, and I think it is the better of the two. Take the plants that have done flowering in April or May, and tear them to pieces with the hand; one plant may thus be made into a good number, each supplied with a nice crown of leaves and roots. Plant these out as mentioned above for the cuttings, giving them from six to eight inches from plant to plant.

Summer treatment.—Almost all the success depends upon this. The soil should be mellow, open, and well drained, enriched with a fair proportion of rotten dung, or leaf mould, and if the soil is very adhesive, a good proportion of road or drift sand. The soil should also be frequently stirred after planting. Waterings must be duly attended to, and, if a vestige of red spider appear, the plants must be well drenched with soot and sulphur. Shadings will be required at first, but as soon as the plants are taking free hold of the soil they must gradually be exposed to every ray of sunshine. Every weed will tell against success, because it will prove that neither cleanliness nor stirring the soil has been attended to. Every runner must be removed as soon as it appears. Unless produced very early in the season, not one

of them will produce anything but leaves during the following winter and spring. This is a first and most essential point of management. Culture must be directed to obtaining strong well-matured heads or crowns; every runner, after a certain size, will be alike a *shader* and a *robber*. When first planted out, and root action is desirable, they need not be nipped too closely at first, but, after free growth is proceeding, every weed should be looked upon as an intruder.

Winter management.—In October they should be taken up and potted, or placed in a bed to be covered by glass. But why not cover them where they are, and thus save labour—if the bed was well prepared at first I do not see why the plants should be moved? The first essential for such saving mode would be the securing of the glass not further than six or eight inches from the plants. But even then, when I tried this mode, I found it was no saving in the end. For instance, the ground was apt to be too wet, and thus the flowers were likely to damp in winter. Both slugs and worms were prone to have their colonies, and then was betide the beauty of the flowers; and besides, leaves were likely to be more abundant than blooms. When transplanted, on the other hand, though raised carefully in balls, a check was given to the growing principle, just enough and no more than to give a hint to the flower-buds to show themselves: and by the time the buds swelled, the roots were spreading in the *fresh* soil, and thus catering for strength of flower-stalk and size of blossom. In planting in the flowering beds, one of two modes may be adopted according to circumstances. First, where the situation is damp and cold: here it is advisable to raise the bottom of the bed one foot above the surface-soil, either by faggots, old wood, clinkers, stones, or even common soil—above this, if the bloom is wanted early, it will be advisable to have a slight hotbed, one foot in thickness, at least, and over that three inches of rotten dung, or leaf mould, made firm, and over all, eight or nine inches of sandy loam, rather rich and rather dry. When the situation is warm and dry, the soil being sandy, resting on gravel, chalk, or porous rock, then any position in the garden facing the south, or south-west, will answer admirably. A little leaf mould may be added, the soil be well stirred and aerated before planting, and if at all wet or exhausted, a few barrowful of good, fresh soil may be added. In planting, beginners should attend to one little matter: take out a trench across the bed, set the plants so near as to leave a couple of inches round them, pack them firmly with the soil, and then water thoroughly, and when that has drained away, cover the surface with the dry, unwatered soil. It is scarcely possible to have the surface too dry in winter if there is moisture enough below. In addition to this, I often cover the surface between the plants, when fairly growing, with a slight layer of dry road-drift and charcoal, which, besides helping to promote a dry atmosphere, slugs can wriggle along, but very slowly, amongst such material when dry. In addition, I may add, that air may be given freely when the external temperature is about 40°, especially when the sun has raised it higher; and frost must be excluded by covering the glass, and protecting the sides of the box or pit. **Pots for the window, or greenhouse,** may be managed in a similar manner, one large, or three small plants for a six-inch pot. This sort involves a little trouble; but that given, and these little matters looked to, there will be no disappointment. All the rest are easier managed, and will require less to be said about them.

2. **PERPETUAL OR TREE VIOLET.**—This is a useful variety. It well deserves the name *Perpetual*, as I have seen it bloom from September to June. The title *Tree*, may not be a misnomer, as this violet may suit that mode better than others; and I rather think it does: though each and

every one of them may be grown in that *mopish* manner where desirable. A number of complaints reached me last winter and spring that it would not bloom early. In every case that came under my inspection the parties had received a counterfeit—namely, the common double blue, a fine thing in its way, producing, when well grown, finer flowers than the *Perpetual*, or *Tree*, but then it will rarely or never bloom in winter—it may also be known by its flowers being flat and broad, whilst those of the *Perpetual* are orbicular. Unlike the *Neapolitan*, the common blue will not agree with the slightest forcing: the *Perpetual* never requires it. In pots, it will bloom splendidly in windows and greenhouses; it will also do admirably in a sheltered raised place out-of-doors, where it can have temporary protection in bad weather. Of course it would do better still in a frame or pit. The flowers are not, in general, very large, but they are produced very abundantly, and are very sweet. All Violets dislike stagnant moisture. Where other conveniences are wanting, they flourish at the foot of a wall, or fence, facing the south, south-east, and south-west, provided you have either a wide board, or a narrow straw-thatched hurdle, from fifteen to eighteen inches in depth, to place against them in wet and frosty weather. For propagation and culture in frames and pots, see *Neapolitan*—only, if bulk is desired, the first-formed runners may remain, as in a fine summer they will be sufficiently matured to bloom along with the mother or principal head. The soil should also have more loam in its composition. Mr. Tiley advertises a *Perpetual Tree* white: the common double white is a poor thing in winter. If this *Perpetual* white is at all equal to the blue in this respect, it will be invaluable where there are ladies. I have not yet tried it.

Forming Tree Violets.—This is best done by dividing plants two or three years old. A nice little head, with a fair supply of roots, and a clean stem between them a number of inches in length, are thus obtained. Whether these are planted out-of-doors, or potted, the stems must at first be supported by little sticks. The head soon takes an upright direction. Ere long, the stem increases in strength, and also in length little by little every year. When once potted, and valued for their singularity, care must be given to supply them with plenty of water, and an open airy place in summer, and to avoid all stagnant moisture in winter. Sour earth about the stems will make them *miffy* and short-lived. Even when not shifted every year into larger pots, the drainage should be examined, a little old soil picked away, and fresh surfaceings applied; and round the base of the stem a little cone of bruised charcoal will be a safeguard. I had them thus grown of all varieties, one of the best was a *Neapolitan*; but I got tired of them: I saw little beauty in the bare stems, and, from a pot similar in size, I could get many more flowers from a plant grown in the usual way. Allowing the runners to festoon from the top for several generations, like an *Aaron's-beard* Saxifrage, seemed an improvement, where all was so *stilted*; but to carry out that idea in a moderate-sized pot pre-supposes considerable attention to rich surface-dressings and manure-waterings.

3. **RUSSIAN VIOLET AND SUPERB VIOLET.**—These are extremely useful single Violets; the latter larger than the common. They are easily propagated by seeds, runners, slips, and divisions, and should never stand long in one place, as young plants generally bloom most freely. They are seldom potted, but they are worthy a place in the cottage window, where they could stand outside in fine weather, and be brought inside in sleet and frost. They will bloom very freely, where sashes and other covering can be given them in winter. In common seasons, they thrive and bloom tolerably well on raised banks, by the side of fences, &c., where a few branches,

or other covering, may be given them in severe weather. From October and onwards, a few rows of them perfume a garden. I understand something grand in this way is looming in the near. A deep, loamy, well-drained soil is that in which all the varieties I have met with in this section delight. If the soil is light and sandy, and tolerably rich withal, the number and size of the leaves will keep the flowers in the shade.

4. THE DOUBLE BLUE AND DOUBLE WHITE.—The last is the most tender. Unless in very mild winters, neither of them flower much until spring. For fine effect, propagate and cultivate the same as the *Neapolitan*, by runners, slips, and divisions. As flowers are produced on the first-formed runners, as well as the crown, they may remain several years in the same ground, but the flowers are likely to get less and less in size. A rich, deep, dry loam is their delight. In such circumstances, the bloom from strong young plants is truly fine. In sandy and chalky soils, the plants run too much to leaf. Need I mention again, that the blooms of all, when dried, long retain their scent. R. FISHER.

CONIFERÆ.

(Continued from page 126).

JUNIPERUS COMMUNIS (The Common Juniper).—This species is a native of Britain, and the colder parts of Asia and North America, growing, under favourable circumstances, to the height of ten or twelve feet, forming then a thickly-branched and not inelegant low tree. Its perfect hardihood recommends it for all open and exposed situations, where few other plants would exist. There are several varieties, some of which far surpass the original species in beauty—namely, *Juniperus communis Canadensis* (The Canadian J.), a dwarf bush from three to five feet high; *Juniperus communis Cracovia*, found near Cracow, a handsome, upright-growing variety; *J. communis Hibernica*, and *Hibernica compressa*, the Irish Junipers; these are also upright-growing varieties; the latter, as its name imports, being very much compressed in its habit; *J. communis oblonga*, and *oblonga pendula*. The latter is a very elegant drooping variety. Both attain the height of ten feet, and are natives of China and Japan. And, lastly, *J. communis Suecica*, the Swedish Juniper, a well-known favourite variety. It is said that in the forest of Fontainebleau this variety has attained the height of fifty feet, and various articles of furniture are made of its timber. I mentioned this fine variety in my notice of Alton Towers; and as it is fifteen years since I saw them, and they were then eight feet high, I suppose they will be now nearly double that height. Why do not we plant this tree for timber, as its wood is so excellent for cabinet work? It is cheap enough—twenty-five shillings will buy a hundred of them a foot high at the wholesale nurseries.

J. DRUPACEA (The Drupe-fruited J.).—Native of the plains of Syria, where, in almost all sand, it thrives and attains the height of ten feet.

J. EXCELSA (The Tall J.).—This handsome species is a native of Siberia, the higher parts of the Himalayas and North America. There it often rises to the height of forty feet, but the highest I have seen in this country was fifteen feet (see page 144). The timber of this species is excellent. There is a dwarf variety called *nana*, and in gardens *religiosa*, being used in some parts in sacrifices, or account of its aromatic qualities when burning.

J. FLACIDA (The Weak J.).—This is a curious species, with a slender, elegant habit. Being a native of Mexico, it requires a greenhouse or conservatory to grow it in. The leaves are lance-shaped, and the branches are drooping; it grows to a great height.

J. FRAGRANS (The Sweet-smelling J.).—From Nepal; also rather tender. Very little is known of this rare species.

J. COSSAINTHANA.—This is a rare species. I saw several fine plants of it lately in Mr. G. Jackman's nursery, near Woking, in Surrey; and, from the habit and colour, I should say it will be, when better known and more full grown, a most elegant tree. It is perfectly hardy.

J. LYCIA (The Lycian J.).—A native of Greece, the Levant, and Siberia; a handsome species, growing fifteen feet high.

J. MACROCARPA (The Large-fruited J.).—I have seen some fine specimens of this silvery-leaved Juniper, and can confidently recommend it as a very ornamental species. The cones are of a pale blue when young. It is a native of Greece, where it is highly esteemed, and planted freely.

J. MEXICANA (The Mexican J.).—The branches of this Juniper are unlike all the rest; they spread out at the base, regularly shortening in upwards, and thus form a handsome pyramidal tree, some 40 feet high. Unfortunately it is too tender to bear the open air in winter in this country, but it is well worthy of a place in a lofty conservatory.

J. NANA (The Dwarf J.).—This small bush is found in Europe, Asia, and North America. It has more synonyms than perhaps any other species. It is the *J. alpina* of Ray; the *J. montana* of Aiton; the *J. communis nana* of Loudon; the *J. communis alpina* of Wahlenberg; the *J. communis saxatile* of Pallas; and the *J. minor montana* of Bauhin. It is Willdenow that has named it simply *J. nana*, the name I have adopted; and a more expressive one need not be; it is truly a dwarf, seldom reaching, even when old, more than a foot high. It is useful to plant at a corner where two walks separate, or close to the walk of the Pinetum; arranging well with such plants as *Abies claustralis*, *J. sabina prostrata*, and such-like alpine, low-growing Coniferae.

J. OCCIDENTALIS (The Western J.).—This species, in its native wilds, is a giant among its kindred, rising to the altitude of eighty feet, forming a noble tree. It is found in great quantity on the higher part of Columbia, where it is greatly esteemed as a timber-tree. No doubt, when more plentiful, it will be grown extensively in this country, both for its beauty and usefulness.

J. OXYCEDRUS (The Thorny Cedar, or Brown-berried J.).—The species is confined to Europe. It is grown largely in Spain, Portugal, the south of France, and in Italy, and has been grown in Britain for more than a century. It is a very low tree, seldom exceeding twelve feet. There are three varieties, namely *taurica*, *echiniformis*, and *Witmanniana*. They are all handsome, and should be in every collection of any note; but in the northern parts of this country they are rather tender.

J. PHœNICIA (The Phœnician J.).—Native, as its name imports, of the south of Europe. It is also found in Russia; and grows from fifteen to twenty feet high. A beautiful, light-green-leaved tree.

J. PSEUDO SABINI (The False Savin).—Native of the Altai mountains; growing much in the style of our common Savin, but more upright, and rather lighter green.

J. PYRAMIDALIS (The Pyramidal J.).—Not much is known of this species; there is a plant so named in the London Horticultural Society's garden at Chiswick.

J. RECURVA (The recurved Nepal J.).—A very distinct species, with both leaves and branches turned back, or recurved; the foliage is light green. It requires a dry soil, is perfectly hardy, and very ornamental in sheltered places. Exposed to the north winds it is apt to turn rusty in winter, much in the same style as the *Cryptomeria japonica*. The variety named *densa* is a

distinct one, and of more dwarf, compact habit. Both are very desirable.

J. SABINA (The Common or True Savin).—Grown in masses, this species has a fine effect. In favoured situations it will form almost a tree. Clothed with a rich brown bark, the dwarf variety, *prostrata*, is well adapted for rockwork, or to place on a lawn to form a sort of fringe to the shrubbery. The one with variegated foliage is pretty, and worthy of a place in a collection on that account.

T. APPELEY.

(To be continued).

THE PETUNIA.

(Concluded from page 145.)

GENERAL MANAGEMENT OF PLANTS INTENDED FOR EXHIBITION.

It is well known to those cultivators who grow plants with an especial eye to show them for competition, that extra care and attention is required in order to beat their opponents, or, even if no opposition is offered, to win the approbation of the censors, and, consequently, a prize. Most societies give directions in their schedules to the judges not to give first-class prizes to inferior specimens, merely because they are the best exhibited, or, perhaps, the only ones present on the tables. This is quite right, and relieves the censors from a most unpleasant part of their adjudication. It is true, there are exhibitors selfish enough to argue, that as their productions are the best present they ought to have the prize offered for the best; but if such confessedly poor things were to have first prizes, the subscribers and visitors would be disgusted; there would be an end put to that spirit of emulation and desire to excel which ought to be the aim of all exhibitions to encourage and bring into play. Then again, such a law will prevent any competitors from bringing to the exhibition any fruits, plants, or vegetables, that are not, at least, respectable, and show that some extra care has been taken to bring those exhibited, at least, superior to the commonly-seen specimens in every garden.

These remarks will, I trust, be taken with candour, as I do not see how any one at all conversant with exhibiting matters can deny their truth; and I would advise every one showing garden productions never to exhibit any article but what is in good, fair condition. To do otherwise ought only to bring disgrace, and not honour or credit to the exhibitor.

THE PETUNIA is no exception, but must be well grown, and freely and finely bloomed, in order to be considered worthy of a prize. The way to manage so as to attain so desirable an end is my business, on this occasion, to describe. The time to exhibit them to perfection is about the last week in June (which is early) to the last week in July, which may be considered, in the generality of seasons, to be late.

Plants intended for this purpose should be well established the preceding autumn, and should not be allowed to flower till within a month of the time of exhibition. They may be kept in pots from three to four inches diameter through the winter. From the first moment of potting, up to the month of May, they should be frequently topped; that is, the two upper leaves, with the buds attached, should be carefully and neatly cut off with a sharp knife. Nipping off with the finger and thumb I cannot approve; it is, to say the least of it, a careless method, and crushes and mutilates a plant in the tenderest part, often causing many of the shoots to mould and perish in wet, damp weather; whereas, a clean cut with a keen-edged knife heals up quickly, and the plant is little worse by the operation.

As the plants grow they must be repotted as soon as

the roots reach the sides of the pots. They should never be allowed to become matted till placed in their blooming-pots. In March, it will be necessary to provide a number of short sticks; if they are painted a light green so much the better. At one of the spring pottings, before the roots have pushed into the new earth, thrust a circle of these sticks round the pot at some distance from the shoots; tie a short piece of nice small bass-mat to one of these sticks, so that the two ends of the mat are equal in length from the stick, then bring each end round a branch nearest to the stick, and, with the mat, draw it gently down to the stick, and tie it to it rather loosely. This is a nice operation, and requires a steady hand and attentive eye, or the shoot will break off from the main stem. When one branch is securely and safely tied, proceed to the next, and so on round the plant till every side-shoot is brought down, and the centre left thinly furnished. Cut off the ends of all the strong shoots, and the plants will soon begin to show they have had a careful hand at work to form them into bushy, round-headed specimens. This is the groundwork to commence with, and as the shoots advance in number and length must be repeated, and longer sticks made use of. If the shoots are too numerous, let them be judiciously thinned, so as not to allow them to crowd each other. The short sticks may be removed when the shoots do not require their directing support. As they advance towards blooming, they may require a few sticks in the centre of each plant to train each shoot into a position so as not to interfere with its neighbour.

The management as to potting, placing in a pit, smoking with tobacco to destroy the green fly, dusting with sulphur to destroy mildew, watering with liquid-manure, giving air, and other points of culture, I have already described under the head "Summer treatment." To these directions I have nothing to add now. If the cultivator has been successful in his operations, the plants for exhibition will, in May, be strong, bushy plants, eighteen inches high, and twelve inches through, and be showing plenty of flowers, which may then, if the show is in June, be allowed to come into bloom; but if in July, the buds must be taken off again, and not allowed to remain till the middle of June. All the energies of the plant must be reserved, in order to have a blaze of fresh, high-coloured blooms on the day they are required for the exhibition table.

T. APPELEY.

INFLUENCES OF THE WET SEASON ON CROPS OF VARIOUS KINDS.

THE near approach of winter renders it necessary to take such precautionary measures as will protect the various products which hard weather is likely to injure. This is the more advisable, in consequence of the unusually wet autumn having rendered everything out-of-doors a perfect receptacle for water, the tissues or cells of plants being charged with water almost to the bursting point. It is easy, therefore, to perceive the effects that frost is likely to have on plants so gorged with superfluous moisture, which has scarcely ever been relieved by a dry day, nor yet (what is equally useful) a cold one. The atmosphere has been, in most cases, mild and warm for November, while the ground has been so repeatedly soaked with drenching rains, that, in spite of the absence of cold and frost, the autumn growth of many things has been much below the average of years. This is apparent to every one in the after-harvest-sown Turnips, many of which scarcely present anything more than the same mass of green leaves that they did two months ago, and that this tardy progress is owing to the cold, drenching rain is evident to every one; since the average atmospheric warmth, if fully equal to

former years, when the various members of the numerous *Cabbage family* continued their growth with more steadiness, if not with more vigour, than they sometimes do in the summer months. Now these perishingly cold rains have been more hurtful to the late-planted *Celery* than most crops, some of it will not arrive at the size and condition fit for blanching; while in former years, and under precisely the same treatment, the late-planted has carried on the supply in the spring, when the larger and earlier was no longer fit for use. This season it will only be fit for the commonest purposes to which green *Celery* is put. This state of things is the result of the long-continued wet weather we have had, in which the herbage has rarely ever been dry, and the ground soddened to the utmost with rain. Even grass, which is supposed to resist, nay, even benefit by the usual autumn rain, has, this season, made less growth since the end of September than is usual with it. Under such a state of things it cannot excite surprise if the more delicate portion of garden produce should have made but a tardy autumn growth. Young seedlings of the *Lettuce* or *Cauliflower* tribe, even where protected by glass, have scarcely been able to resist the decaying influence of such a protracted season, while a considerable portion have absolutely perished under it. The obvious tendency of so early and wet an autumn is to prolong the winter by lengthening its advent. In a usual way, we have more or less of moisture before severe cold sets in, and hardy plants are but seldom perfectly dry during November; but in the past season October has been substituted for that month, so that the horticultural autumn may be truly said to have "set in" a month sooner than usual.

It will be difficult to find a remedy for such a state of things, but many palliatives will suggest themselves. It will now be discovered to what good purposes efficient drainage may be applied; and if such do not already exist in our gardens, the present time must point out the necessity of making it so. The utility of tanks, channels, and all watercourses will also have been put to a severe test, and their purposes proved. Coupled with these is the quality of walks, roads, and paths, which a series of wet weather, if accompanied with traffic, soon finds out their defects. All these, and many more evils resulting from such drenching rains, have so far retarded the usual autumn work, that we must urge on our brethren to be on the alert when a change does take place; and all house-work being, as we expect, advanced as far as possible a-head of the season, and others, to which the inclemency of the weather offers but few impediments, must be pushed on as far as possible, in order that the general outdoor work may receive the united energies of the whole staff, when the period does arrive to bring it into action. A thoughtful business habit of contriving work will suggest many things, which can as well be done in wet weather as in dry. We therefore advise our young friends to cultivate this useful part of their studies, as much may be gained by it.

Among the plants suffering from the absence of sunshine are the winter *Cucumber plants*, which, though in an atmosphere purely artificial, are not yet exempt from the causes which prove fatal to more robust productions out of doors; as, apart from the want of that all-important element of their existence, "sunshine," the atmosphere of hothouses is, or must be, more or less charged with that moisture which reigns everywhere. It may be true that a dry heat applied removes or drives off part of the water, but then it substitutes a temperature in its place ungenial to vegetation. That this is the cause of many disasters is too well known; nevertheless, there is no other way, and those who have young *Cucumber plants* struggling against the elements must act very carefully with them. Avoid, by all

means, "drip," and if the house or pit where they are growing be flat-roofed, or of low pitch, drip will invariably be the consequence. A homely, but useful protection to small plants is to suspend (from the roof) a large-sized bell glass over them; observe, this must be some height above the plant, so as to leave it in possession of the whole atmosphere of the house to breathe in, or a few large squares of clear glass placed in a steep slanting direction over them, and on their north sides is also useful, as it catches the drip from the roof on its outer surface; while its inner one, we expect, is too steep a pitch and too smooth to allow what moisture collects there to drip on the plants. Nevertheless, with all the care that can be taken, the progress at this untoward season is but tardy; still they may be carried through, and we advise our young friends to keep a vigilant look out for mildew in some of its forms. This is more especially necessary, as this plant cannot endure those forcible means made use of to eradicate it. From more robust subjects, the first approach of it must be instantly checked by rubbing over the spots with a soft brush dipped in lime-water, and a little quick-lime may be brought into the pit. The gas emitted by sulphur is too much for this plant. We need hardly observe, that all plants likely to introduce insects of any kind must be kept carefully out of the way, as the means necessary to destroy these intruders is an ordeal too severe for this delicate subject, which, at this untoward season, requires more than the usual amount of nursing to ensure anything like a successful issue. Heat must be steady, and means taken so to balance its humidity as to be congenial; from 65° to 70° is about the proper temperature. But I will return to this subject at the first early opportunity.

J. ROBSON.

GREASING THE WHEEL.

By the Authoress of "*My Flowers*," &c.

IT was a word of advice from the wisest of men, "Boast not thyself of to-morrow; for thou knowest not what a day may bring forth." Who among us lays this advice to heart? Who among us has holy boldness enough to say, as St. James directs us, "If the Lord will, we shall live, and do this and that?" Who among us but looks forward, and expects, at least, not only length of days, but continuance of all the blessings we possess? We may not boast, perhaps, but we *presume*. We do not consider what a day may bring forth; we do not think about it; we have had good health, good luck, no accidents; and we forget whose hands fashioned us, and from whom we receive and hold the breath of life. Whichever of my readers can feel a humble, blessed consciousness, that such is not *their* case, happy and highly favoured is their state! Many there are, many more may there be, of that blessed band! They alone dwell in peace; they alone are watching and ready, when the hour of trial comes. Those who think little or nothing of the uncertainties of this world are careless and glaring in their conduct. One would think that a man who rests upon *good luck*, or upon the fact of never having met with danger and accident, or who never troubles his head at all about how or why he is alive and well, would, at any rate, take common care of himself, and not run foolish risks to put himself in the way of mischief. But this is seldom the case; and such fool-hardiness is seen among men as makes us almost suppose they are without reason, as well as without God in the world.

A few weeks ago, an instance of this fool-hardiness took place in a neighbouring parish; and I hope it may be a warning to some of my careless readers to avoid such dangerous acts; for in one little moment an affliction may be brought on that will cause us distress and suffering for the rest of life.

A farmer was engaged in threshing out corn with a thrashing-machine. It was a singular circumstance, that one morning, one of the men employed on the farm went to his master,

and said, "Sir, I had a very strange dream last night. I dreamed that one of us had our hand smashed in the chine." Of course no notice was taken of this, except, perhaps, a smile; but the man himself thought a good deal about it, and kept as much at a distance from the machine as he possibly could. In the course of the day the wheel wanted greasing, and the farmer's head-man, or bailiff, prepared to do it. The horses were going on; and on being spoken to of the danger, the bailiff said, "Oh, I can't spare the time; I can do it while they go on; I can't waste time while I'm greasing the wheel." So on went the horses, and the bailiff crept between them to the axle of the machine, where the grease was to be applied. The man was very careful of his hand as he put the grease in; but while thinking of the one, he totally forgot the other. His left hand was thoughtlessly placed on a part of the machine, which caught it, and crushed it in an instant! Bleeding, and in agonies, the poor man was taken up, as soon as the horses could be stopped, and carried to bed. The surgeon was summoned, and gave it as his decided opinion that the hand must be taken off and part of the arm also. The poor fellow was so distressed at the idea of losing a hand, which supplied him with bread, that he begged for further advice, which was cheerfully granted; and he chose the surgeon whose opinion he should like to have. He came; but alas! there was no hope; the hand must be taken off just below the elbow; nothing else could possibly save his life. The operation accordingly took place; and the man, who rose up in the morning in health and strength, and began his daily work with all his usual vigour and light-heartedness, when evening closed in lay on the bed of suffering, deprived of a limb, and disabled for ever from gaining his bread in the way in which alone he was fitted to do it. One moment's heedless folly has brought the bitter repentance of a whole life. The five or six minutes, which could not be spared to take a wise and rational precaution, have caused days and weeks of suffering, of loss of time, and of heavy self-reproach—hardest of all to bear. What must be the thoughts of a poor man, lying helpless and crippled for life, when he thinks that his own mad stupidity has laid him there? When he thinks that he needed not to have done so foolishly—that the very boy who was driving the horses must have known his danger, and would not have done the same? Oh, how he must mourn and lament, and wish he had not been a fool, when it is too late; when his poor crushed hand is off and buried, and nothing can be done but to bear the loss, and pray for grace to profit by the lesson, and that the trial may be sanctified to him!

I hope and trust that this poor man's accident may be a warning to those of my readers who are headstrong and daring. Every day of our lives we see instances of thoughtless, reckless risk; and, perhaps, few of us have not been guilty of some one or more ourselves. It is not weak or wicked to be cautious: it is so, when we persist in doing a dangerous thing which need not be done. It was not duty that obliged this poor fellow to grease the wheel while the horses were going on; nor is it duty that leads us often into mischief. We are very well aware that we are ready enough to get away from duty when it leads us into perilous places; we can often find a good excuse for escaping *then*—for being prudent and cautious *then*. It is our own self-will and hot-headedness that runs away with us, and gives us reason to repent, often to the end of our lives.

I must say a word more upon this occurrence, before I address a startling question to my readers. The dream—it was a striking and remarkable one. Such things have been before. We know that under the Old Testament dispensation God appeared unto men in dreams, and many wonderful events were revealed in visions during sleep. But those days have passed away; and we have no Scriptural warrant for expecting revelations by means of dreams. Still, the Lord works in whatever way He pleases; and without ignorantly and blindly attending to our dreams, as many do, we would not totally set them aside, or laugh contemptuously at them; for what the Lord has used as an instrument to work His will should be no matter of scorn to us. In this case, the fact occurred, and I do not ever remember to have heard of so striking a coincidence before.

And now, one question before I close my paper. How are we greasing our wheels? We are all pressing forwards to something; but are we greasing our wheels for time, or for eternity? If we cannot spare time from our earthly business to seek "the kingdom of God and his righteousness,"—to take "oil in the vessels with our lamps,"—we shall lose that which is worth more than a right hand—we shall "lose our own souls." We shall find ourselves caught and entangled in a snare that will crush us to all eternity, from which there is no deliverance and no hope. We shall look back from the bottomless pit with weeping and wailing and gnashing of teeth, upon the senseless folly, the raving madness, that chose "the pleasures of sin for a season," instead of the lasting glories at "the right hand of God."

Readers! we are all of us thrashing; thrashing for time, or for eternity; and One speaks to us in plain words than those of a dream, "Repent, for the kingdom of heaven is at hand." Let the poor bailiff, on his sick-bed, teach us a mighty truth. We may be "in the morning like grass that groweth up;" in the evening "we may be cut down and withered." Let each of us ask our own heart this great and settling question—How are we greasing our wheels?

A FEW OF THE BEST DAPHNES.

In order to give an account of these, I must include the *Daphne odora* and its varieties, for these are beautiful, and deserve for winter nosegays a place wherever room can be spared for them. They are excellent to plant out in large conservatories, where they are just at home, although almost hardy enough to stand out under a warm wall or corner, with a little protection during severe weather in winter. They do well, also, wintered in a pit or frame, where the plants are not too large for such places.

This species generally begins flowering in January, and continues more or less in flower until May. No plant is more desirable for nosegays; it is so very sweet, and continues so long in perfect beauty after being cut for this purpose. I have no doubt it would be rooted very well from cuttings by those who have proper places for this work, but they are more commonly grafted upon the common spurge laurel, *D. laureola*. Several years ago, when I first saw the variety, *D. odora rubra*, I was so much struck with it, that of course I wanted it in some way or other, and my friend who possessed it said, I have young plants of the *D. laureola* in pots, and I will put you on one graft; he did so; he took off a scion with two crowns or a forked top, and inserted it into the pot by the side the stock it was to be worked upon, and inarched it to the stock just below the fork, and placed it in one of his heated pits, where it soon united; and the plant came to my hands with its forked top, and standing upon two legs as it were. It so stands now, and a fine specimen it is, too, but the stock on which the scion was inarched is but a very little larger now than when the scion was put on, whilst the scion is nearly three times the size of the stock at the present time. I am not inferring from this circumstance that many of the *Daphnes* might not be raised from cuttings, for I have known the *D. pontica*, and others, to be raised from cuttings, thirty years ago, under a north wall, under hand-glasses.

There is another variety called *D. odora variegata*; but I consider *D. odora rubra* the best.

The Hardy Kinds are as follows:—*Daphne hybrida*, or, as it is most generally known by the name of *D. dauphina*, Dauphin's *Daphne*. This is one of the most desirable plants that any garden, great or small, can possess. It is a beautiful plant to grow against a south wall or warm corner. It does well as a shrub in the open border, and from the goodness of the plant, it is worth a place, planted out in a conservatory, where it would be seen in bloom nearly the whole year, more or less.

We have a large plant of this upon a conservative wall covering a space of about five feet by five to six feet. It is not nailed in like a Peach-tree, but just fastened up, sufficient to secure it firmly to the wall, with a fine thicket of breastwood over the face of the whole tree, protruding about from six to nine inches from the wall. It seldom requires any pruning more than it gets by being so much cut for nosegays, as its flowers are very sweet-scented. Nearly

every shoot over the whole tree terminates in a bunch of bloom of a purplish-red colour, and the whole foliage is of a dark shining-green colour. It commences flowering in September, and continues in bloom, more or less, until the end of April. Ours is a perfect gem at this moment (Nov. 20th). I was, with a friend, a few evenings since admiring the beauty of this plant, and to see the moths flying from flower to flower (mostly of the *Phalaena gamma*, or the Greek (i. moth-kind) proved that they admired its sweetness too.

This shrub was planted out here the spring following the severe winter of 1837-8, and has never been protected. I believe it is nearly as hardy as the *D. laureola*, on which it is grafted. When the weather is very severe, it causes some of the blossoms to fall off; yet, after a change again to a south-westerly wind and a few showers, the tree looks as gay as ever.

Daphne cneorum.—This is well named "the Garland flower," and a prettier little hardy plant does not exist. It should always be a front border plant when planted out, and have as nice, open, sunny spot as can be given it. It is often grafted, like others, upon the *D. laureola*, and small plants of it look very pretty in this way, either in pot or planted out. It may be planted out in almost any good garden soil when grafted on the *laureola*, but when the plant stands upon its own roots it should be planted out in peat, in a dry, warm, sunny situation, which makes the finest specimens to stand the test of years. I do not know how many legs of *D. laureola* it would require to bear up a specimen we have of this beautiful plant on its own roots, and many rooted plants might be taken from it if required, for the outer stems, as they come in contact with the earth, put out roots readily, consequently it is increased easily by layers. There are two varieties of this plant, namely *Variegata* and *Grandiflora*. Both the species and its varieties are equally beautiful. It commences flowering in April, and continues oftentimes more or less during the summer months, of a beautiful reddish-pink colour, and very sweet-scented. The flowers keep perfect a long time after being cut for nosegays, for which it is so very desirable.

Daphne ponicia is a very desirable kind as a front shrub in the plantation, or as a bunch or group by itself. Low ground, or a cool situation, suits it best. Indeed, it does very well under the drip of other trees, and also best upon its own roots in such places. It grows too straggling and rampant to be grafted upon the *D. laureola*—though grafted plants are all very well for a few years' growth of any of the kinds. The stems of this species, as they come in contact with the earth, put out roots freely enough, so that, of course, it is readily increased by layers. The whole plant is of a pale-green colour, rising from two to three feet in height. Its flowers are numerous, and of a yellowish-green colour, and very sweet-scented. It flowers in April and May.

Daphne Mezereum, commonly called Mezereon, has two varieties, the white and dark red. Though a native of our own woods it is none the worse for that. These are plants of very pretty growth, suitable as front plants to the plantation, and, as a poet says,

"Though leafless, well attired, and thick beset
With blushing wreaths investing every spray."

These plants are increased by seed, and require a good sandy loam. The ripe berries look very tempting upon the plants, but they are poisonous. The Mezereon is one of the first shrubs to be seen in bloom in the plantation. February and March is its time of flowering, and, if not the only shrub then in bloom, it will for certain be the most showy and the sweetest.

Daphne Collina, *Neapolitana*, and *Gnidium*, and several others are grafted upon the *D. laureola*, and, as shrubs, are very well where the number of kinds is the consideration.

The *Daphne laureola* is itself a particularly useful plant to live, flourish, and flower under the drip of trees, and in the shade where few other things will live.—T. WEAVER.

CROSS BREEDING OF FOWLS, AND CURE FOR THE ROUP.

I HAVE read attentively nearly all papers that have appeared in THE COTTAGE GARDENER relative to that now

"fashionable subject, the Cochin-China fowl and its rival the Spanish;" and throughout the whole I find each advocating the cause of his favourite bird too frequently by vague assertion or "mere fancy." The table by "Gallus" is not at all satisfactory; it would require that the same number of fowls of each kind and sex be kept together for a considerable length of time—say twelve months—the food they consume weighed, and the return they give in eggs also weighed; we could then come to something like a correct estimate of the relative value of the different kinds. But at present one asserts "the Spanish lay larger eggs, and are more profitable to keep in consequence of consuming much less food;" another affirms "that Cochins do not eat more than Spanish of Dorking," and that "their frequent and pertinacious desire to sit is their only drawback."

The Cochins, on all hands, are allowed to be very productive, but their very great desire to hatch is a failing in the breed. The Spanish, on the other hand, are seldom or never inclined to sit, and lay eggs of a much larger size. Now, it appears to me that a cross between the Spanish and Cochin would be the very perfection of fowls; and a brood of fowls may be raised between them combining the qualifications of both, just as you, Mr. Editor, would take the pollen from one flower, and put it in another. Take an instance: If I had a fine formed flower of a colour which was desirous of altering in its progeny, what would I do? I would look about me for the best-formed flower of the colour I wished, and impregnate with this pollen my favourite-formed flower, and the probability would be that I should obtain, some of the desired colour, and equal in form to its female parent; and, reasoning from the world of flowers to the world of animal life, I would find the same general law to hold good in both. "But, ah!" says the amateur, "I'll have no mongrel race; I'll have nothing but pure breed." Now, I do believe this to be a great mistake. How, I would ask, have we improved our breed of cats? Is it not by breeding with those animals who have what we want in greatest perfection, and by following it out? as we find them in the improved state they are now in; and I cannot see why the breeding of poultry should be an exception.

I have been led to make these remarks in consequence of having last year a chicken from a cross between a Poland hen and a Cochin-China cock. It turned out a hen, and began laying in the beginning of January last (being only hatched in July), and laid, on an average, five or six eggs a-week until the end of March following, when she manifested a desire to sit, and was then set on a dozen Cochin eggs, eleven of which were hatched by her; and before the chickens were three weeks old she had begun laying again, and has continued doing so, I may say, almost without intermission ever since; for when she showed an inclination to hatch again, a single day, or two, at the utmost (very different from Cochins), in a crib, put the fever off, and in eight or ten days she was laying again. She moulted about a month ago, and was scarcely finished moulting when she began again to lay; and although she may not lay so many days running as Cochins, still I have no doubt she lays within the year a greater number, and the eggs are considerably larger. I have two pullets this year from the same hen and a Cochin cock, which seem to promise equally well: and in the spring of next year I mean to try a cross between a Spanish cock and a Cochin hen, and I have no doubt that the progeny will be larger and stronger than the Spanish; and the number of eggs will be increased from the productiveness of the Cochin, and "the pertinacious desire to set" will be lessened by the Spanish, and altogether a better fowl will be produced for profitable purposes (and that is what is really wanted) than what either will produce separately, and all my observations on the breeding of fowls confirms it.

I have kept fowls for several years, but have never known what disease was, until this season. A disease (I am at a loss to give it a name) has seized on nearly all my young broods when about half or three-parts grown, and several of them have died in consequence—wasting and pining away. The trouble, to all outward appearance, being in the head. The first thing that strikes one is the ruffled state of their feathers, afterwards a discharge from the nostrils, and as the disease advances, the head, between the eyes and the

bill, swoll up in small pimples nearly the size of a small pea, and very frequently a kind of froth is seen working about over the eyes. After being from home for two or three days, I found one with the disease in a very advanced stage, and on taking it up in my hand it appeared little heavier than the bones and feathers should have been. I took the little sufferer and washed all its head about the nostrils with soap and milk-warm water, and dried it with a cloth, gave it a little toasted bread steeped in tea, part of which I had to put down its throat, being so blind it could hardly see. Having before tried everything recommended in book, and many things beside, without effect, I again tried as a change (thinking it very probable the bird would die at any rate) some iodide of potassium. I dissolved ten grains in an ounce of water, and having taken a small piece of loaf-bread an inch square, and half that in thickness, I dropped some of the iodide on the bread, say about sixty drops, and gave it. Next morning I again washed it with soap and water, and dried it, gave it a few grains of corn, which it either could not see to eat, or did not feel inclined to do so. I then gave it a little toast steeped in tea, as before, and concluded with giving it the same quantity, as before, of iodide, and in the evening I repeated exactly the same, toast and iodide. The following day it was decidedly better, and ate the little corn I gave it evidently with a relish, after which I gave it the same iodide, and continued that treatment for about a week, when I put it out with the other fowls, and only occasionally afterwards giving it a little of the same medicine; in about a fortnight to three weeks it was as well as any fowl in my walk. Since then, I have treated many of them in the same way, for the same disease, and once having done so, I have not lost a single fowl, and I shall be glad to be found to be as useful to others as it has been to me. I have found cream-of-tartar the best laxative medicine for fowls, and have almost always ended my cure by giving them a little; as much as will lie on a sixpence, for one fowl, is a sufficient dose.

If you think the above remarks of use to any of your numerous readers, I am at your disposal, and you may learn again how my other cross-breeds succeed.—A. S. W. Gloucester.

TABLE FUNGI.

(Continued from page 110.)

THE *Hydniums* form another genus, most of which are edible, and several highly esteemed as food. *Hydnum ericaceum*, which is found growing upon old oaks, forms a common article of diet in the Vosges, a range of mountains separating Lorraine from Alsace. *Hydnum coralloides* is eaten in Piedmont and Tuscany. *H. auriscalpium*, which is indigenous to this country, and found growing on fir canes, and *H. leoninum*, a native of Sweden, are also edible. *H. album*, has somewhat the flavour of the Cantarille. *H. repandum*, however, is the one most generally esteemed, and is reckoned amongst the most delicate fungi of Italy. In preparing it for the table, being a very dry fungus, it requires to be cooked for a long time, or it is tough; but when well stewed in rich gravy, it forms an excellent dish, and has a slight flavour of oysters.

The *Boletuses* form another genus, which, although including poisonous species, contains also many that are valued as an article of diet, as much, if not more, than any previously mentioned. So highly, Dr. Badham says, is the *B. edulis* esteemed, that gold, and silver, and dresses, may be trusted to a messenger, but not this *Boletus*, because he would eat it on the road! Perhaps no genus of the fungi supplies such abundance of food to so large a proportion of the population of the globe. The species are generally of large dimensions, and are found in immense profusion. *B. edulis* is the easiest cultivated of all fungi, and is found growing naturally almost in every locality where an oak-tree or trees exist, and *B. scaber* is almost as abundant. According to Drummond, many species of *Boletus* are used as food in Western Australia; and I have no doubt that those fungi seen by travellers, the dimensions of which equalled crouching lions, belonged to this genus. The *B. scaber* is a favourite amongst the Russians and Poles, who have many ways of cooking it.

In Hungary, a soup is made of *B. edulis*, and considered a great delicacy. In other parts of the Continent, many species, as *B. subtomentosus*, *B. granulosus*, *B. edulis*, *B. scaber*, &c., are brought into the markets, but, undoubtedly, *B. edulis* is considered by all as the best, and in my opinion, when fresh, is good eaten in any way. I have eaten it raw with bread and butter and enjoyed it. My experience, however, has taught me that it is best to remove the tubes of this genus before using them as an article of diet, as independent of their being watery, they have a hot peppery taste, and are very liable to be loaded with insects or their eggs.

With respect to dressing the *Boletuses*, more especially *edulis*, I quite agree with Dr. Badham, when he says it will improve any dish. I will give, however, the following recipes:—

Boletus edulis soup, as made in Hungary (Paulet). Having dried some *Boletuses* in an oven, soak them in tepid water, thickening with toasted bread, till the whole be of the consistence of a purée, then rub through a sieve, throw in some stewed *Boletuses*, boil together, and serve with the usual condiments.

Boletus edulis is also fine fried in fresh butter, served up on dry toast, and eaten with or without beef-steaks, the seasoning with salt, pepper, &c., left to the cook.

Agarics form the largest genus of the fungi, and produce many, both poisonous and eatable. I regret that space will not allow me to enumerate all its species, which, as is well known, have from time to time been used in different parts of the globe as food. The British I shall briefly notice here, as my next paper will be confined to the British fungi exclusively. The *Agarics* are dispersed in almost every region of the globe, affording to both savage and civilised natives an abundant supply of wholesome and nutritious food. On the Continent, and more especially in Poland and Russia, several *Agarics* are used and highly esteemed as an article of diet. *Agaricus transilvanicus* has been reported to be eaten by the people of Montpellier, but it is a very watery mushroom, and must form a very indifferent food. *A. nivalis* is said to be eaten by the Tuscans, but I cannot recommend it as an article of diet in this country.

A. vaginatus is eaten largely by the poor of Muscovy, but cases are on record in which it has proved poisonous. *A. procureus*, which is known by many other names, is largely used throughout France and Italy. The receipts for dressing *Agarics* are numerous. I shall, therefore, only give a few which may be also found most useful for dressing fungi generally.

Fried Fungi.—The usual method of frying fungi is either in oil or fresh butter. The latter I consider far preferable, and served up in the following way:—When the fungi are nearly done, have ready some dry toast, place it in the frying-pan, and in a few minutes turn it, place the fungi on the toast, sprinkle them with a little pepper and salt, and when the toast is warm through, convey them to the table, and eat while hot.

Grilled Fungi.—Many fungi are far preferable grilled, but will require a little butter to prevent their burning, and may be seasoned as in the last, with pepper and salt; as, however, the essence of the fungus is often deposited in the fire in a liquid state, my experience has taught me, if the cook possesses good patience, and time is not an object, that broiling on a fork, or in a Dutch-oven, with many fungi, is far preferable, as in this way they do not get burnt, and the liquid is preserved.

Stuffed Mushrooms.—Take large mushrooms, full grown, but remove the gills, and place in lieu of them the following stuffing:—Bacon shredded, crumbs of bread, chopped herbs, and a little garlic or eschalot (as for omelette), salt, pepper, and a taste of spice. Broil in paper as a maintenance cutlet, moistening with butter when necessary.

Mushroom Dumplings.—An agreeable dish may be made from the common mushroom, by simply cutting up the small (or button) mushrooms, and forming them into a dumpling, with pieces of bacon the size of a dice, and a sprinkle of salt and pepper.

F. YORKE BROCAS.
(To be continued.)

SHANGHAI OR CHINA FOWLS.

THIS fine sort of fowl has been often described, but I consider that amateurs have been rather too limited in their descriptions, and that their rules for the fancy birds of this breed are too narrow and restricted; so that many families of fine and pure-bred Shanghai fowls cannot be brought to submit to them; a short explanation of which I will endeavour to give.

First, then, "The beak should be short." Now, I do not notice that it is shorter in these than other fowls; but I think the front part of the head is longer.

Next, "The comb should be medium-sized, single, and straight," but I often see it bent from side to side, and occasionally slightly inclined to be double at the upper extremity, and often it is over the medium, and as I do not know of any other breed of fowls having this peculiar bent-comb, so I see no reason why it should be objected to.

Then, "They should not be tufted." But were not some tufted, there would not have been any necessity for this rule, and it is very constant in some families. Some persons think these fowls descended from the great St. Jago fowl, which is described as often tufted, in which case I do not consider it right that the tufts should be objected to. Others seem to fancy they were obtained by the Chinese from some of the South Pacific Islands. Could any one throw light on this subject it would be interesting. They are described as having "double gills or wattles," but this I consider a mistake, as all I have seen have rather short, broad, single gills; the ear plates are, however, large, folded, and somewhat pendant, which may have given rise to the error. These are all points of the head, and I believe a fowl may differ in them, and still be a pure-bred bird; not that I should consider all of the imported fowls to be of the true stock. Again, I think fanciers have dwelt too much on colour, the dark birds being least prized; but I think them generally the heaviest fowls; and the buffs they endeavour to breed without black, not because it is the natural colour, but because it is difficult to be obtained; for the same reason the white are esteemed, though I think they will often be found to be somewhat the smallest. In the other points I heartily concur, and I think the most important consideration is weight; next shape, wide shoulders, full well-covered thighs, resembling a Dutchman's breeches; short, thick legs, and feather-footed. Long, lank, and narrow-made birds will occasionally be produced, but I should not keep them for stock. Others, which are admired by some, have no feathers on their feet, but I think the feather-footed birds approach nearest to the original type.

The tail is the best criterion by which to judge of the purity of the breed that I know of—this is always small, and though composed of the same number of feathers as those of other fowls, they are very short, scarcely reaching above the bunch of curled rump feathers, and the chickens attain to a large size before any tail makes its appearance, though the pullets sometimes get tails earlier, and a half-bred chick will sometimes be a long time before it has a tail.

A five-toed fowl I should look on with suspicion, although it might be perfect in all other respects. The productiveness of the Shanghai fowls is very great, the hens being good layers, close sitters, and laying again soon after hatching; the chickens seem hardy, and grow fast, though they feather slowly. The eggs, the shells of which are often dark-coloured, are good eating, and the young fowls are excellent for the table, being fine-flavoured and juicy. To this I can bear testimony, for having reared many more than I want for stock, and not having been able to part with them, I have killed several, and always found them delicious, much better in flavour than any fowl I have ever eaten, and though never cooped or fattened, they were in the highest condition.

The way to raise large fowls is to hatch them early, feed them well, and not to breed from relations. The gait of the male bird is peculiar, rather crouching, resembling that of a cock turkey.

They are a quiet fowl, not straying far from home, are easily kept within bounds, and seem to bear confinement well. I do not know why they should be called Cochinchina fowls, as they are brought from the more northern part of China, principally from the town of Shanghai and its neighbourhood.—B. P. BENT, *Bessel's Green, near Seven Oaks.*

NORMANDY.

(Continued from page 112.)

THROUGHOUT France generally, and especially in the Departments of Calvados and La Manche, female accomplishments assume quite new and unexpected forms. Near Bayeux, I saw a woman on her knees by the roadside breaking stones; another, near Periers, was mowing some clover in a field, to take home to her quadruped, probably a horse, who was too tired to carry it himself; and in the town of Periers, I noticed a female postman—a *facteuse*, instead of a *facteur*—going her rounds to deliver the letters and newspapers. She had the usual tin box slung before her, but had dispensed with the glazed hat and the livery coat. At Sartilly, a lady was painting the wheels of a cart, while her husband was employed about finishing the body; and between Sartilly and Avranches, many women were to be seen lustily at work with the flail, threshing away with right good will and thorough good humour. One party, consisting of half-a-dozen threshers, was composed of five women and one man; and, as the diligence passed, they laughed, as if our appearance amused them quite as much as their's did us. It may be expected, that women thresh, they also winnow; and female hands w/ flitting fans of a different description to those small ones in ball-rooms, for they tossed and shook no trifling measure of wheat.

The harvest here is variously reported. The *Journal d'Avranches* for September 5, quoting the *Moniteur*, states, that "certain journals have published estimates as to the harvest of 1852, which would tend to make it supposed to be insufficient. These journals have been wrongly informed. The result of the information received by government is, that the harvest of 1852 will be, on the average, equivalent to that of ordinary years, and even *supérieur*, by nearly one-fourth, in certain departments, which furnish a great proportion of the cereals consumed in France." But the *Conseil d'Arrondissement* of Avranches, in reply to the questions put in the letter of *M. le Préfet*, dated Au 12, 1852, is of opinion

1st. That the harvest of 1852 is inferior to the harvest of an ordinary year, for wheat and rye.

2ndly. That the amount of deficiency is about *un tiers* for those two species of cereals.

3rdly. That the produce would be sufficient for the wants of the *arrondissement* if the harvest of barley and buckwheat is not compromised; with this observation, that the barley is already injured.

4thly. That the influence of the temperature *est* to be considered as the cause of the diminution and the inferiority of the produce.

5thly. That the atmospheric accidents have been the unusual cold in spring, the heavy and continual rains in May and June, and the excessive heats which succeeded during the month of July; that all these accidents were necessarily injurious, in the first place, to the blossoming, and afterwards to the formation and the development of the grain, whose yield will, consequently, be lighter.

Meanwhile, the French press is calling general attention to the subject. It fears, if not a scarcity of bread by the middle or end of the winter, at least a *deartheness* of that article; and it is especially apprehensive of the consequences of such a fear acting upon the popular mind. When we remember the past history of France, the amount of a harvest becomes a matter of vital importance to the country.

Before taking leave of the *Conseil d'Avranches*, I will mention, that "In consideration of the lateness of the cereal harvest this year, of buckwheat particularly, it expresses the wish that the opening of the sporting season may not be fixed before the 20th of September. It petitions *M. le Préfet* to take this expressed wish into consideration."

Englishmen would not like a similar interference, and would be jealous of trusting any single individual, whether *Préfet*, or Lord-Lieutenant of the county, with the power of shifting the 1st of September, and of sparing the partridges till the end of the month. But there can be no doubt that it would be a good thing if some constitutional authority—for instance, the county magistrates assembled in quarter sessions—could exercise a like discretion. In France, the *ouverture de la chasse*, or opening of the shooting-season, takes

place at a different date, in different *arrondissements* and *communes*, according to circumstances. Liberty, in the abstract, is a very good thing; but, if we are to have any legislation on the subject of game, the liberty of killing half-grown birds, and of wading amidst standing, or outlying crops, is a great piece of folly.

Fishing is also locally regulated. An *Ordonnance* published not long since, sets forth, that the taking of fresh-water fish is forbidden in all navigable and floatable rivers and streams, in all canals, brooks, and water-courses whatever throughout the Department of the Seine-Inferieur, at all hours of the day and night, during the time of spawning, under certain penalties. The spawning season is fixed from the 1st of January to the 31st of March inclusive, for trout; from the 1st of March to the 1st of May, for eels; from the 1st of April to the 31st of May, for barbel, bream, chub, pike, roach, perch, carp, gudgeon, and bleak. The taking of sea-fish which ascend the rivers and streams, such as salmon, sturgeon, lamprey, flounder, and mullet, may be practised at all seasons, attending to the regulated size of the flounders and mullets taken; but the fishers must draw back into the river any fresh-water-fish which they take along with the sea-fish during the same time. Sea-fish may be taken only from the 1st of October to the 15th of April. Fishing may be practised an hour before sunrise, and an hour after sunset. It is prohibited during the rest of the night, except at the arches of bridges, at dykes, locks, and sluices, where it may go on by night as well as by day. The fishing for salmon, flounders, mullets, &c., is also excepted from this prohibition, for they may be taken at any hour of the day and night. The shrimp and prawn fishery (by nets) is also restricted, on the sake of sparing the fry of turbot, cod, sole, &c., which are usually taken with them. But, it should be remembered, that a single fish of prey—and all are fishes of prey—a middle-sized cod, or skate, or turbot, will make more havoc among the rising generation of their own nearest relations, than half-a-dozen human shrimp-catchers.

Normandy cider has so well-established a reputation as to be deservedly world famous. But the Normandy of the old régime has, since the First Revolution, been divided into the five Departments of Seine, Inferieure, Eure, Calvados, Orne, and Manche. Though cider is abundant in all these, Calvados is pre-eminent, both for quantity and quality, and is the main source of that enormous supply of terrestrial nectar which annually flows from the earth, through the stems of innumerable apple-trees, to assuage the thirst and cheer the hearts of hundreds of thousands of hard-working mortals. The beverage itself derives a name from the department, exactly as Moselle, Champagne, and St. Julien are wines that are designated by the title of their place of growth and vintage. CALVADOS, printed in large letters on the sign board or shutters of any house of entertainment in Normandy, means to say that there a draught of Calvados cider is to be had.

A distinction is made in Normandy, which is hardly known out of it, between the different qualities of cider. The strongest and the best only is honoured with the name of *cidre*; the weaker and inferior—anything in the shape of a second-choix brewing—is styled *boisson*, or drink. Of both immense quantities are consumed, of the latter especially, which, when well-flavoured, as it most frequently is, and from a cool cellar, is even more deliciously refreshing, on a hot summer's day, than the more potent liquor. *Cidre* only is thought worthy of being bottled; *boisson* never, except in large stone ware receptacles for the day's convenience and consumption. *Boisson* is always very cheap; it flows everywhere, almost like water. Cider varies in price, according to its real or fancied merit, and the pains and taste bestowed on the mode of bottling it. The dearest I have ever tasted was at an inn at Montevilliers, where this special *vin* was called *Sillery de Normandie*, and loaded down at the cork and smartly labelled, like Champagne. We were charged a franc, or tenpence, the bottle; and it certainly was excellent. But we are now using some very nearly as good, at six sous, or threepence, for a large stone bottle holding four good tumbler glasses. The most luxurious of these drinks is first-rate draught cider out of one of their large *barriques*, or barrels, that is just fresh tapped.

A sentence or two from a Havre paper will illustrate both the great drought of April 1852, and the plentifulness of cider in Normandy:—"The want of water in those localities where there are wells and reservoirs only, and no streams, has come to such a state, that in some houses they make use of *boisson* for domestic purposes. There are many parishes where it is absolutely necessary to fetch water eight kilometres (about four miles English), and where, consequently, there is real economy in employing *boisson* to take its place. We are assured that many (religious) processions have already been undertaken, in order to obtain the cessation of this so injurious drought."

Immediately after entering within the boundary of Normandy, the abundance of this popular beverage is perceptible, from the manner in which it is, in Norfolk phrase, *slumped* upon the table at every meal, at every inn. Large wide-mouthed decanters full of the pale yellow fluid, slightly bubbling and sparkling from the cask, and without stoppers, which are never dreamt of, drop hither and thither on the well-covered board, and utterly push the water-bottles aside. It is an effectual, though not altogether a complete expulsion of the weaker by the stronger. Empty the decanter of *boisson*, which stands at your elbow, and presto! behold another filled to the very neck; but you sometimes have to ask two or three times for a glass of water fresh from the well. At a *table d'hôte* breakfast, all the cider you can swallow is included in the charge; I have sometimes thought, that the more you drink of it, the better they like you; but if you take coffee at your morning meal, that is considered an extravagance, and is made an extra item in the bill. For the almost universal fashion at the Norman inns, is to eat only two meals a day, and those right good ones, breakfast at ten, and dinner at five o'clock. I have long tried to find the difference between the *dejeuner*, and the dinner, but cannot discover it. At first, a false clue to the secret was given by the occasional absence of soup; but we went further, and fared better. A genuine Norman breakfast begins with soup, with oysters, and prawns, perhaps, as a preliminary skirmish to the coming onslaught; then it proceeds legitimately through boiled beef, salad, ragout, cutlets, fish, roast meat, and so on, and concludes with a dignified dessert of fruit, cheese, and sugar biscuits. Everybody drinks *boisson*, cider, and wine; water may be had with a little pains-taking. Tea and coffee are no more alluded to than at the company were at one of Lucullus's suppers in the hall of Apollo. It is absurd to apply the terms of "breakfasting and dining," to such a course of regimen. A real Norman never "breakfasts," at least in public; he only eats two dinners a day. And there is little distinction of sex in this matter. If a lady sits down to table, and eats a plate of soup, a slice of beef, a trutton chop, a couple of rolls, a quantity of salad or green haricots, a slice of gruyère, a pear, and a peach, with a tumbler or two of Bourdeaux wine slightly diluted with water,—Will any Englishman call that a "breakfast," at whatever hour of the day the deed may be done? And if the same feats are performed at any subsequent hour, what is that? Dining again. But every country has its own customs; and it must be allowed that the appearance of the Normans generally does full credit to the liberality of their diet. Many of the women are perfect models of the Michael Angelo style of figure; and men six feet high and upwards, bony and muscular, with broad shoulders, large good-humoured features, and the limbs of giants, which do not quite answer to our usual notion of Frenchmen, any ten of whom can be thrashed by any one Englishman. I got considerable credit for observing that the Normans could not be an ordinary people; otherwise they would not have effected the equester of England; and, on reflection, I cannot confess the remark to be either false or too flattering. At Valognes, particularly, I was struck with several faces which bore a remarkable resemblance to the portraits of the notables of our early history. Fancy might be something, but not everything in the matter. D.

(To be continued.)

DORCHESTER POULTRY SHOW.

THIS Show, on the 24th of November, taken altogether, was a very good one for the first; there were 200 pens of birds, including several pens of extra stock. "The Town

Hall was much too confined a place, and the coops much too small for Cochins; and some of the wire fronts had much too small a mesh, and were not big enough to put your finger through; but next year no doubt they will improve. Neither was the arrangement of the pens well managed—some being very low, and others up too high. The judges were Mr. Baily, of London, and Henry Hinxman, Esq., of Durnford, near Salisbury.

The *Spanish* were very indifferent; *Dorkings* good; *Cochins* very good, especially Mr. Steggall's and Mr. Devenish's. The first prize *Cochin* chickens were the best match ever seen, both in size and colour. They were small, but good-shaped, and looked older than specified. The *Malays* were middling; but some very nice specimens of *Game* fowls were there; and the *Spangled Hamburg*, very few entries, were fair. *Polands*, only two competitors, were very nice, but all had dark feathers, more or less, in their breasts. There were some very beautiful *Bantams*, especially those which gained the first prize, belonging to A. C. Sayers, Esq. *Geese*, good. *Ducks*, a large entry, and some very fine specimens, both *Rouen* and *Aylesbury* white. *Turkeys*, very few and middling. Considering the weather, the attendance was very good, and a great many sales took place. Parties were very eager to buy; and to those who are not initiated in the £1000 prohibitory clause, as at Birmingham, could not understand the enormous difference in price of birds of nearly the same apparent value. The attendance before two o'clock, price 2s., was very good; and after that, at 1s., there was quite a crowd, and it was very difficult to get about.

SPANISH.

Cock and two hens.—No first prize. 2nd. Mr. C. Clark, Street.
Cockerel and three pullets.—No award.

DORKING.

Cock and two hens.—1st. Mr. E. Pope, Great Toller. 2nd. Mr. W. Pope, Symondsburry. 3rd. Mr. F. Noyes, Laverstock.
Cockerel and three pullets.—1st. and 2nd. Mr. E. Pope. 3rd. Mr. W. Pope.

SHANGHAE.

Cock and two hens.—1st. Mr. C. D. Saunders, Tarrant Hinton. 2nd. Mr. F. C. Steggall, Weymouth. 3rd. Mr. A. C. Sayers, Ramridge, near Andover.
Cockerel and three pullets.—1st. Mr. W. Symonds, Milborne. 2nd. Mr. J. Crane, jun., Tolpuddle. 3rd. Mr. H. Fookes, Whitechurch.

MALAY.

Cock and two hens.—1st. Mr. C. Clark, Street. 2nd. Mr. H. Williams, Stinford. 3rd. Mr. A. C. Sayers, Ramridge.
Cockerel and three pullets.—No first prize. 2nd. Mr. W. Manfield, Dorchester.

GAME.

Cock and two hens.—1st. Mr. J. T. Ensor, Dorchester. 2nd and 3rd. Mr. J. Crane, jun., Tolpuddle.
Cockerel and three pullets.—1st. Mr. J. T. Ensor, Dorchester. 2nd. Mr. J. Crane, jun., Tolpuddle.

GOLDEN-SPANGLED HAMBURGH.

(No award.)

SILVER-SPANGLED HAMBURGH.

Cock and two hens.—No 1st prize. 2nd. Mr. C. Clark, Street.
Cockerel and three pullets.—1st. Mr. C. Clark.

GOLDEN-PENCILLED HAMBURGH.

Cock and two hens.—1st. Mr. C. Clark, Street.
Cockerel and three pullets.—1st. Mr. C. Clark.

SILVER-PENCILLED HAMBURGH.

Cock and two hens.—No 1st or 2nd. 3rd. Mr. R. Fookes, Milton Abbas.

POLAND.

Cock and two hens.—1st and 2nd. Mr. T. P. Edwards, Lyndhurst Railway Station.
Cockerel and three pullets.—1st. Mr. T. P. Edwards.

BANTAMS.—GOLD OR SILVER LACED.

Cock and two hens.—1st. Mr. J. Goodenough, Godmanstone. 2nd. Mr. J. Crane, jun., Tolpuddle.

BANTAMS.—BLACK, WHITE, &c.

Cock and two hens.—1st. Mr. A. C. Sayers, Ramridge. 2nd. Mr. R. Fookes, Milton Abbas.

GESE.

Gander and one Goose.—1st. Mr. W. H. Drummond, Troytown. 2nd. Mr. W. Manfield, Dorchester.

DUCKS.

Drake and two Ducks.—1st Prize to Mr. E. Genge, Waterson; Mr. E. Pope, Great Toller; and Mr. T. D. Chard, Tarrant Hinton. 2nd. Mr. H. Dunman, Troytown. 3rd. Mr. T. P. Edwards, Lyndhurst Railway Station.

TURKEYS.

Cock and one Hen.—1st and 2nd. Mr. W. H. Manfield, Dorchester.

HITCHIN POULTRY SHOW.

The Hitchin and Home Counties first exhibition of domestic poultry took place on the 20th, 22nd, and 23rd instant;

and a first attempt has seldom achieved better success than crowned the efforts of the spirited projectors. Mr. Goodwin, and the gentlemen of the committee, were aided in the arrangement of the details by one of our spirited Birmingham amateurs, and all were, and had reason to be, gratified by the result.

As usual on these occasions, the Shanghaes formed the chief attraction, and numbered nearly one-third of the fowls exhibited; nor did they fail to do their part toward the support of this popularity, for in half-a-bucketful of eggs which were removed from the pens during the exhibition, for the purpose of being destroyed, there were five only which were not laid by Shanghae hens.

Mr. Taylor, of Shepherd's Bush, showed a pen of his pretty *Andalusian* fowls, whose compact, domestic look, and bright slate-coloured plumage, form a decided improvement, in appearance at any rate, on their first cousins, the Spanish, of funeral hue.

JUDGES.—Edward Hewitt, Esq., Eden Cottage, Spark Brook, Birmingham; and Mr. Baily, Mount Street, Grosvenor Square, London.

COCHIN-CHINA. (WHITE.)

Cock and two hens.—1st. John Fairlie, Esq., Cheveley Park, Newmarket. 2nd. Mr. William Lort, Ward End, Birmingham. 3rd. Mr. G. C. Peters, Moseley, Birmingham.
Cock and three pullets.—1st. Mr. G. C. Peters, Moseley, Birmingham. 2nd. Mr. William Lort, Ward End, Birmingham.

COCHIN-CHINA. (COLOURED.)

Cock and two hens.—1st. Mr. H. Gilbert, 17, Upper Phillimore Place, Kensington. 2nd. John Fairlie, Esq., Cheveley Park, Newmarket. 3rd. C. Punchard, Esq., Blunt's Hall, Haverhill.
Cock and three pullets.—1st prizes to Mr. H. Gilbert, 17, Upper Phillimore Place, Kensington; Mr. G. C. Peters, Moseley, Birmingham; Mr. W. Lort, Ward End, Birmingham; and Mr. R. Steward, South Town, Yarmouth. 2nd. W. T. Squire, Esq., Barton Place, Mildenhall. 3rd. C. Punchard, Esq., Blunt's Hall, Haverhill, Suffolk.

DORKING. (WHITE.)

Cock and two hens.—2nd. Mr. J. Jennens, Moseley, Birmingham.
Cock and three pullets.—1st. Mr. H. Forster, Markyate-street, Herts. 2nd. Miss Mary Lane, Maidencroft, Hitchin.

DORKING. (COLOURED.)

Cock and two hens.—1st. Mr. Oliver Steed, Baldock. 2nd prizes to Mr. F. Thursty, Abingdon, Northamptonshire; Mr. H. Forster, Markyate-street, Herts; and Mr. G. C. Adkins, Edgbaston. 3rd. Mr. Joseph Lucas, Hitchin.

Cock and three pullets.—1st. Mr. T. Nice, Great Bradley Hall, Suffolk. 2nd. Rev. J. Boys, Biddenden, Kent. 3rd. Mr. W. Harrison, Bagworth Park, Leicestershire.

SPANISH.

Cock and two hens.—1st. Hon. Mrs. Astley, Swanton House, Thetford. 2nd. Mr. John Taylor, jun., Creasy House, Shepherd's Bush, London. 3rd. Mr. James Barber, Great Yarmouth.
Cock and three pullets.—Prizes withheld.

GAME FOWLS. (WHITE.)

Cock and two hens.—1st. H. Thurnall, Esq., Royston, Hertfordshire. 2nd. Mrs. Hoggett, Norton, near Baldock.
Cock and three pullets.—1st. Mr. W. Groom, Holt, Norfolk.

GAME. (COLOURED.)

Cock and two hens.—1st. Henry Thurnall, Esq., Royston. 2nd. Mr. W. Groom, Holt, Norfolk. Two 3rd prizes. Henry Thurnall, Esq., Royston.

GAME. (COLOURED).

Cock and three pullets, chickens of 1852.—Two 1st prizes. Henry Thurnall, Esq., Royston. 2nd. Mr. A. Cannell, Cringleford, Norfolk.

GOLDEN-PENCILLED HAMBURGH.

Cock and two hens.—2nd. Mr. T. Church, Acle, Norfolk.
Cock and three pullets.—1st. Mr. T. Barber, Acle, Norfolk.

GOLDEN-SPANGLED HAMBURGH.

Cock and two hens.—1st. Mr. G. C. Adkins, Edgbaston, Birmingham. 3rd. Mr. T. Cane, Baldock.
Cock and three pullets.—No entry.

SILVER-PENCILLED HAMBURGH.

Cock and two hens.—1st. The Hon. Mrs. Astley, Swanton House, Thetford. 2nd. Mr. J. Dutton, Bury St. Edmunds.

Cock and three pullets.—1st prizes to Mr. Charles Thurnall, Whittleford, near Cambridge; and Francis L'Estrange Astley, Esq., Burgh Hall, Thetford. 2nd. Rev. Justice Chapman, Clareborough Vicarage, East Bedford. 3rd. Mr. James Monsey, St. Miles, Thorne Lane, Norwich.

SILVER-SPANGLED HAMBURGH.

Cock and two hens.—1st. Mr. Joseph Jennens, Moseley, Birmingham. 2nd. W. J. Vivian, Esq., Singleton, Glamorganshire.
Cock and three pullets.—No entry.

MALAY.

Cock and two hens.—3rd prizes to Mr. M. Ridgway, Dewsbury, Yorkshire; and Mr. W. Harrison, Bagworth Park, Leicestershire. Class not Metropolitan.

Cock and three pullets.—Prizes withheld.

POLAND FOWLS. (GOLDEN.)

Cock and two hens.—1st. W. J. Vivian, Esq., Singleton, Glamorganshire. 2nd. Mr. C. Stephenson, 2, Loudoun Place, Brixton, Surrey.
Cock and three pullets.—2nd. Mr. C. Stephenson, 2, Loudoun Place, Brixton, Surrey.

POLAND FOWL. (SILVER.)

Cock and two hens.—1st. W. J. Vivian, Esq., Singleton, Glamorgan-shire.

Cock and three pullets.—2nd. Mr. C. Stephenson, 2 London-place, Selkirk, Surrey. 3rd. Mr. Youell, Yarmouth.

POLAND FOWL. (OF ANY OTHER COLOUR OR VARIETY.)

Cock and two hens.—1st. Mr. G. C. Adkins, Edghastan, Birmingham. 2nd. W. J. Vivian, Esq., Singleton, Glamorgan-shire.

Cock and three pullets.—No entry.

MIXED BREED.

3rd. Mr. Hainworth, Hitchen, and Mr. Bennell, Hitchen.

(The Judges disapprove of this class.)

FOWLS. (DISTINCT VARIETY, NOT NAMED IN THE ABOVE CLASSES.)

1st. Mr. John Taylor, jun., Cressey House, Shephard's Bush, London. 2nd. Mr. E. Hughes, Yarmouth. 3rd. W. J. Vivian, Esq., Singleton, Glamorgan-shire.

BANTAMS. (GOLD LACED.)

Cock and two hens.—1st. Mrs. Elizabeth Roper, Croxton, Thetford, Norfolk. 2nd. Mr. U. Spary, Markyate-street, Herts.

BANTAMS. (SILVER.)

Cock and two hens.—1st. Mr. H. J. Jones, Bedford. 2nd. John Fairlie, Esq., Cheveley Park, Newmarket.

BANTAMS. (WHITE.)

Cock and two hens.—1st. Mr. M. Leno, jun., Hamel Hempstead.

BANTAMS. (ANY OTHER COLOUR OR VARIETY.)

Cock and two hens.—1st. Mr. James Monsey, St. Miles, Thorne Lane, Norwich. 2nd. Mr. Wheeler, Hexton House, Herts. 3rd. Mr. M. Ridgway, Dewsbury, Yorkshire.

GUINEA FOWL.

Cock and two hens.—Mr. Joseph Whiting, Hitchin.

TURKEYS.

Cock and two hens.—1st. John Fairlie, Esq., Cheveley Park, Newmarket. 2nd. Mr. W. Harrison, Bagworth Park, Leicestershire; Mr. A. Cannell, Cringleford, Norfolk; and Mr. G. Roberts, Kingwalden, Herts. 3rd. Mr. Charles Thurnall, Whittleford, near Cambridge; and Mr. John Stead, Baldock.

GEES.

Gander and two geese.—1st. Mr. J. Taylor, jun., Cressey House, Shephard's Bush, London.

DUCKS. (WHITE AYLESBURY.)

Drake and two ducks.—1st. Mr. Arch, Clifton, Beds. 2nd. Mr. C. Thurnall, Whittleford, near Cambridge. 3rd. Mr. Robert Tingey, Henlow Beds.

DUCKS. (COLOURED VARIETIES.)

Drake and two ducks.—1st. Mr. Youell, Yarmouth. 2nd. C. Punchard, Esq., Blunt's Hall, Haverhill, Suffolk.

MUNDOVY.

Drake and two ducks.—1st. Mr. John Stead, Baldock, Herts.

PIZZONS.—Twelve prizes were awarded to Mr. G. C. Adkins, Edghastan, Birmingham; and Mr. Beazor, Yarmouth; Mr. O. Stead, Baldock; and Mr. J. Playford, Yarmouth, had each a prize.

TO CORRESPONDENTS.

BEE KEEPING.—"The three questions asked me by your correspondent, B. B., at page 210, I will answer in this communication. First, I must ask B. B. to remember that the word 'enormous' was not applied by me to swarms, but to one swarm; and B. B. must also understand that both that term, as well as the expression 'arguing quantity,' &c., were only incidentally used in acquainting you, at your request, with my experience of the 'Country Curate's' system, and not with a view to publication. Before alluding to the subject of B. B.'s questions, I have to inform you that five hives were tried by me on that plan, though I said nothing of the fifth in my last to you, and for this reason:—It was my intention greatly to alter this hive (though not destroy it), which would, of course, prevent it being a fair subject for experiment. When I did alter it I found it very full of bees, and containing nineteen pounds of honey—in fact, full; but the plan of the hive (a wood and glass toy affair) is miserable, as you may well imagine when that is all it will contain. Three of the four others I consider the best I have in all respects, but regret now to report badly of the remaining one. This failure was a swarm of June 24th, and an earlier one than one of the last three alluded to. The hive that threw off two swarms in one swarmed June 20th, and is as strong as any I have, weighing now 21 lbs. contents, and full of very savage bees, which I like. On looking over my apiary on Wednesday last, for a good hive, to give a friend in exchange for a Cochins-China cock, I pitched on the failure, weighed it, found it contained at least 21 lbs. of honey, and thought all 'couleur de rose.' My gardener (a great hand at bees) remarked, 'They seem very quiet, Sir;' and so they might, for on turning it up there appeared a very few in it. To-day I smoked it down with *Racodium cellare*, and it did contain a queen, though her majesty was small and poor looking; and the bees, about 3 lbs., filled a dinner tumbler of the ordinary size. I have just most carefully weighed the honey, and find it 22½ lbs.; so my Wednesday's calculation was 1½ lbs. under. Of these five hives the wood and glass toy hive was not shut up at all; the rest only until the evening of their swarming days. Three were moved to new stands, one hundred yards from the old place; and two to new stands, forty yards from the old place. The failure (?) was moved one hundred yards, so was that which threw off the two swarms in one; the good old hive forty yards. While I was a month at Scarborough, my heaviest straw hive went wrong, and was of course emptied by the other bees; and whether the uproar injured the 'failure,' which stood next it, you must judge—that is the opinion of my gardener. Question 1.—I use three-sized hives of straw; one weighs, empty, 3 lbs., another 7 lbs., the third 9 lbs. All three have straw tops, with 3½-inch holes in them. The first has a perfectly flat top, and measures (inside measure) 12½ in. by 9½ in. The second is

shaped like the old bell-hive, but a portion of the top flat, and measures 14½ in. by 10½ in. deep. The third, which I alluded to as "a very large hive," measures 14½ in. by 12½ in. deep. The shape of this last is, I know, against all rule; but they do very well with us. Question 2nd.—I never did weigh a swarm, though I have seen and lived a great many, and know a large one, when I see it, even on a hot day. Question 3rd.—I broke up, August 14th, three hives, each weighing (contents of course—honey and comb) as follows:—First, 26 lbs.; second, 27 lbs.; third, 28 lbs. Same day I broke up two old hives of wood, to convert into Taylor's—first, 34 lbs.; second, 27 lbs. You will be interested in knowing that the bees driven out of two of the first three mentioned were joined and put into an empty hive, and sent the same day to the moors, with the cap in its top full of honey, which the good old hive made, to start them with. This hive returned containing 18 lbs. of moor honey, and the cap as full as it went. At the same time I sent to the moors two late swarms; one returned containing 33 lbs., the other 35 lbs. The above is the 'amazing quantity,' with the addition of 22½ lbs. got from the failure (?) an hour ago. My plan of dealing with Taylor's hives is exactly similar to Investigator's plan of dealing with Golding's; and our success seems pretty much the same, except that, perhaps, his top would not hold more than 28 lbs., whereas mine hold about 33 lbs. full. We all here think that if I had had twelve Taylor's, instead of three, this season, every top would have been full. 12 times 33=396, supposing each hive, of course, to be reasonably strong to start with. If I live to another season my plan will be, seven 'Taylor's,' five 'Country Curate's.' 'Investigator' says July (all July) was very productive; so I found it. I cannot account for the wonderful quantity of honey gathered so late this last season; I never before found it so. We had no rain during the month of July in the day-time, and fearful heat, but splendid showers at night. Pray excuse the length of this, and believe me yours truly. P. S. October 27.—This should have been posted a fortnight ago. My bee-keeping, I admit, is neither for pecuniary profit nor scientific enquiry. I am tempted to add, that if they shut up their old hives for such long periods, it is not to be wondered at that when they are let out, and fly back to their old stands, they are not recognised, if scent has anything to do with it.—C. R. R."

CYCLOPS LEAVES ROTTING-OFF (*Flora*).—This has probably received rather too much wet, out-of-doors, but do not despair; take away every leaf carefully, that shows the least trace of decay. Put the plant in any window where you can give it air in this mild weather. Do not give much water until the weather changes, or the plant seems to want it, by the first symptoms of drooping; prevent frost from hurting it; top-dress with a little rich, light soil; strew some powdered charcoal over the top of the tuber, whence you remove the falling leaves, and unless there is something radically wrong, such as having been shaded when the leaves were growing, we think you will yet be rewarded with bloom.

GLOXINIA (*P.*).—You ask how to shade in a light forcing-house, glass all round. We do not think shading will be required now. When the sun gets strong it will. Any usual mode will do. We generally place them in the front of such a house, and paint the glass a little higher than their tops, with hot, double size, and we find this effectually saves the bloom.

VIOLA ARBorea (*Subscriber*).—See an article to-day by Mr. Fish.

CLIMBERS (*An Old Subscriber*).—In addition to those you have for stove, *Passiflora princeps*, *Passiflora kermannensis*, *Allamanda cathartica*, *Hoya carnosa*. We presume there is plenty of light. For the middle house, *Mandevilla suaveolens*, *Kennedya Marryatiae*, *Taenocissus pinnatifida*, *Tecoma jamaicensis*, or *Cherere*; for greenhouse, *Dolichos lignosus*, *Jasminum gracile*, *Hardenbergia pauciphylla*. Lists of climbers for different purposes have been given lately.

FLOWER-GARDEN (*Turquoise*).—Your planting is perfect, on the principle of contrasts; we cannot alter a leaf, unless it were 15 (*Unique Geranium*) to *Saponaria calabrica*, for this reason, that young plants of *Unique* do not flower freely, and that old ones will make the bed too high for 16 and 17, without constant attendance to pegging and training. Again, 15 is your match for 20, and it will get higher than 20; if you change 15 for 20, perhaps it will suit better than in *Saponaria*. Then, 20, 21, and 22, would be higher than their opposites, 15, 16, and 17, and that is, no doubt, what you intended. You are certainly not "A Novice." There is not one out of ten, of old practitioners, who could do it half so well. The shapes of 10, 11, 12, and 13, are very unusual, but we shall engrave the whole some day or other.

INDIAN SEEDS (*W. C.*).—One-hundred-and-forty-five Indian seeds, correctly named, 120 of them are the very pick of the Indian *Flora*, and the rest not at all so common as we often see from India, and great judgment exercised in the selection, but without a particle of practical knowledge of what we want, and what we can manage in England. We question if there is a nurseryman, or botanic gardener in the three kingdoms, who would give the value of the paper in which they are packed, for the seeds. If you imagine a line drawn across our Indian territories, from Bombay to Sylhet, you may lay it down as an axiom, that there are not ten kinds of seeds on the south side of that line that are worth the carriage from India; and not twenty seeds from the first fifty or sixty miles to the north of that line.

NOISSETTE DAMARQUE (*Some One*).—You did wrong by treating this rose like a Banksian Rose, and so kept it from flowering in the autumn; you cut in the small wood, and cut out the strong shoots. Do exactly the contrary, and you will be rewarded with autumn flowers; but if it comes too strong after the first flowering, you had better give a slight root-pruning, say early in June.

RULES AND BEDS (*An old Subscriber*).—In the first place, are you willing to lay out £20 or £25 on bulbs for your seventeen beds, if that would plant them, which we much doubt? Be content with about 800 mixed *Hyacinths*, 600 mixed *Early Tulips*, 1000 mixed *Narcissus*, 5000 mixed *Crocus*, 100 double *Tulips*, 500 *Spanish Iris*, 500 *English Iris*, in mixtures, 600 or 700 double, single, and star-flowered *Anemones*, about 300 *Turban Ranunculus* in three colours, 50 *Fritillaries*, 100 *Crown Imperials* in four colours, 50 *Marigold Lilies* in four colours, 500 *Colchicum autumnalis*, 50 *Daylily Violets* in two colours, 50 *Feathered Hyacinths*, 50 *Grass Hyacinths*, 50 *Mask Hyacinths*, 1000 *Winter Aco-*

sites, 1000 double and single *Snowdrops*, with as many florist's bulbs as your own fancy tells you. We would not plant a quarter of your space with bulbs. Your garden will look more like a nursery in Holland than anything else; too much of a good thing is as bad as too little, and yet the above will only make a scanty clothing for your space.

GLADIOLI (Regular Subscriber).—The heights are relative, but what the proportions are on your soil we cannot say. The highest is 1, *Gaudensia*, orange-scarlet; 2, *Ramosus*, white and red; the rest are about the same height, or, say on an average, a yard high, and the colour various shades of red and orange. *Puittacus*, *Gaudensia*, and *Floribundus*, may be planted any time between this and April. The right name of *Floribundus* is *Oppositiflorus*; and if you have it true, it is all but white. The rest of them should be planted now. The time of flowering will be governed by your locality, and the time of planting; for instance, if you plant *Puittacus* now, it will come in flower next June; plant again in the beginning of February to bloom in July; plant in March for August bloom, and in April for September and October bloom.

TROPÆOLIUM TUBEROSUM.—*Wareham* says:—"I dug up my *Tropæolum tuberosum* a day or two ago, the result was—Twenty-one tubers, larger than the original, for which I gave it; twenty-two about the same size; twenty-four somewhat smaller; and something like sixty very small. I cooked a few, and they were very nice, resembling *Asparagus* somewhat in flavour. The small I have pickled. These are not as raw as a salad. A paper in *Chambers' Edinburgh Journal* mentions that they produce fifteen to eighteen tubers; if that is the average, I must consider mine as a good crop; and I think I should have had more had I enticed it up, as there were many immature tubers outside the ground. It was manured with wood ashes and burnt sticks, half-charred. Though it cannot be expected to supply the place of the Potato, yet I see no reason why it should not be cultivated as an esculent. The tubers keep well, and, as an occasional dish, would, I think, be found useful. Can you suggest a way to make it flower well?" Your crop was very good, a little above the average on good land. Tastes differ so much in these things, that we do not like to say much either way. We have tasted them, and all the Oxalis that have been recommended, and we still prefer the worst potato to the best of them.

ROSES (Ibid).—They will do perfectly well where you say, and they require little or no sun in winter; same with Pinks and Carnations.

NAME OF HARDY SHRUB (C. G.).—Yours is the Sea-Buckthorn, or Sallowthorn (*Hippophae rhamnoides*); one of those few bushes that will grow well in sea-sand, to the edge of the tide.

FUCHSIA-BED (M. Fermanagh).—Your compost is very good for a Fuchsia-bed; indeed, too good to be passed—One-part garden mould; one-part turf, ashes, and a little sand; and two-parts turf. Fuchsias will grow away like willows in such a soil. Make it full two feet deep for them. But do not cut of planting climbers in the centre of such a beautiful bed; nor a *Corymbiflora Fuchsia* either, which, instead of being "too delicate," is so ravenous, that it would eat up all the others before the end of the season. For a row in the centre, *Racemosa* or *Graciosa* are the cheapest, and as good as any if you transplant them every other spring, so that they do not encroach on the new sorts all round. Look at the list we gave last July, before you decide on what kinds to plant. Your *Cleopatra* Fuchsia will grow too strong for *Dr. Jepson*, so you must keep them well apart, with others between.

BEES IN TAYLOR'S HIVE (A Subscriber).—Our correspondent says:—"I have a stock of bees in Taylor's Hives, as described in his 'Bee-keeper's Manual,' third edition, page 17. The stock-box they have been in three years, the combs are getting very black, so that I should be very glad to change them into another, and I think there is now a chance of so doing, if I knew how to proceed; they being very strong the summer before last, I put a cap on, fast, so that I cannot now take it off. I have been following the side-box system, as described in the above work, page 29, but have not succeeded very well, as they swarm most seasons, and scarcely ever fill the side-box; last summer they threw off a strong swarm in June, and were very full afterwards. I put a side-box too, they worked very well into it, but did not above half fill it, and by what I could see through the glass, I thought there was little or no honey in it, so I thought I would let it remain till the bees left it, and were in the stock-hive, and then take it away, and put the stock-hive in its place. I have tried several times, but always found a great many bees in it, so I thought I would let it remain till the weather became cold. Last night being very cold, the thermometer out down to thirty-two, with cold wind, and the Staffordshire hills covered with snow, but as soon as I stirred the box they were all on this move, as usual. I tilted the box up two inches on one side, hoping they would go into the other at six o'clock; I then let it remain till ten o'clock, but then found them all, as usual, in the side-box, and very tracible; in fact, one flew out and stung me, whilst lowering the box down off to the floor-board. This morning I find them there as usual, and on examining the stock-box, found but three or four bees in it, but very heavy indeed with honey, full quite three-parts down. I have put it in its place again, but should be very glad if I could take it away, so that the bees may have the box with new combs; but how will they succeed, the box being but half-full of combs? There is plenty of honey in the stock-box, and I should be glad to know how to give it to them in the best way. I always feed at the top, with tins, as described in the above work, page 65. Would it be better to put the honey in the comb in the tin, and feed them in that way; and would they increase the combs at this season of the year? or would it be better to put the box the bees are in, on the top of the stock-box, and let them help themselves? but I fear in that way they would again take possession of the stock-box, with the old combs, which I do not want them to do." You may safely take the stock-box away, but cut seven or eight pounds of honey-comb out of it, and place it under a cap or bell-glass, upon the top of the box the bees are in, and when they have emptied the combs of honey, give them another supply.

SHANGHAI OR COCHIN-CHINA FOWLS (Bristol).—These are one and the same, and we have abided by our determination to call them *Shanghai* only. We cannot make our correspondents always do so. The variety is not known in Cochin, and they are found only about Shanghai, and other northern districts of China. "China fowls," as you suggest, would be a correct name, but we think *Shanghai* is accepted generally.

The following, from a correspondent in Gloucestershire, quite agrees with what we have ascertained from a traveller recently from China, and which we shall soon publish in another form. "You would oblige by informing me, if you can, why the 'Poultry World,' in speaking of China fowls, use indiscriminately, as they do, or, in fact, why they use at all, the prefix 'Cochin,' and do not call them simply 'China fowls?' I have endeavoured, but in vain, to ascertain the origin of the name 'Cochin-China,' as applied to fowls, and cannot learn that there is, but, on the contrary, I believe, from all I have learned, there is not, any breed peculiar to and to be found in that particular part of China, or bearing its name. I have kept China fowls for nearly four years, and possess birds bred from the largest sort, and some of the earliest (if not the first, except the Queen's, presented to Her Majesty by the Emperor of China) introduced into England; those birds, however, came from a far more northerly province, viz., that of Heang-nan, in China Proper, to which place, also, I know that the best birds in this country, that is, those that have taken prizes during the past and current year, are indebted in part, if not wholly, for their parentage. The synonyme of Shanghai, which has now become generally current, was given to the race to which mine belong merely because they were shipped from the Port of that name; and as a distinction from the smaller class of birds which at the earliest English Exhibitions were described and acknowledged by the Judges as Cochin-Chinas, between which and mine there is a great difference, as there is also between those originally and those now received as Cochins. In one of your recent numbers, an article appeared stating as a necessary characteristic of pure Cochin-China fowls that they must have no tail feathers, I should be glad to know upon what authority it is so stated. I maintain that pure bred China birds (cocks), of the finest sorts, come from what part of that country they may, have, or ought to have, perfect tail feathers, but of a dwarfish description; they should, I am told, be fourteen in number; and if any of these are wanting, the attention of the judges at exhibitions should be directed to ascertain whether such feathers have been lost accidentally or plucked intentionally to meet the erroneous and absurd fashion of the day, which appears to be 'that the best China fowls must be a buff colour and tail-less.'—T. A." We do not remember anywhere its being stated in these pages that Shanghai fowls should be without tails altogether, but we are quite sure that cocks of the pure breed have no sickle feathers in their tails.

POTATO-ONION (F. Withers).—Plant offsets in early spring, about the beginning of March, in rows eight inches apart, and the point of each offset just above the surface. The soil as for other onions. They have completed their growth by September, and may then be taken up to plant again at the end of October, or to be kept until the following spring. Do not earth them up, nor give any cultivation except an occasional earth-stirring.

PARLOUR AQUARIUM.—*Clericus* would be glad to know where he can purchase one of these. He also requires some seed of *Polygonum varicifolium*.

EXCHANGE OF DUCKS, &c. (Vicar).—We have given notice that we cannot insert such notices in future. We are not merely liable to advertisement duty, but give offence to advertisers.

WHEAT DIBBLING MACHINE.—J. R. N. wishes to know which is the best for making the holes and delivering the seed at the same time.

BEES (H. Edwards).—Leave the comb in the hive, tie a covering over the mouth, hang it in a dry place, and put a swarm into it next year.

DISEASED GRAPES (A Subscriber, Guernsey).—The berries of your Muscats were affected with what is technically called "the spot." The following is extracted from *The Cottage Gardeners' Dictionary*:—"It is a gangrene, probably occasioned by an irregularity in the supply of moisture and vicissitudes of temperature, but especially it one of the extremes is much below the degree of heat most favourable to the healthy growth of the plant. Muscals are particularly liable to this disease." Muscats require a higher temperature than most other grapes, and that of your greenhouse was probably much too low during our recent ungenial weather. The large *Haricot Bean* you enclosed, and which you state is commonly cultivated in the south of France, would be advantageously grown by our cottagers if hardly enough for our climate; its green pods and dried seeds being equally excellent for boiling. It is probably the *Lima* variety, and if so, requires the plants to be forwarded in a hotbed?

WORM-CASTS ON LAWNS (Henricus).—These cannot be entirely prevented. Frequent waterings with lime water keep the worms from coming near the surface.

SHANGHAI COCKEREL (A new Subscriber).—Send your address, and state what aged bird do you require. The other information you seek will appear in due time.

PUMICE STONE (Pteris, Dublin).—This will do very well for a smallinery.

TROPÆOLIUM TRICOLORUM (G. F. Willand).—We cannot give you the name of your plant by the two small leaves sent. The *Tropæolum tricolorum* that has put up four inches, and now died down again, we should say has been kept too wet, and most likely its roots have decayed too; whether or not, stop watering until you see if it will put out again, which probably it will not do for several months. September is about the time this plant begins to shoot out, at which time it should be potted. Until growth reappears the pot and tuber may be placed upon a dry shelf.

NAMES OF PLANTS (Troublesome).—The leaf you enclosed is of the *Calla Æthiopica*, mentioned at page 113 of our sixth volume. (J. R.).—The crimson flower is *Siphocampylus Surinamensis*, var. *rubra*. The orchid bud was crushed. (Rev. M. E.).—Yours is *Veronica speciosa*; even in Ireland we think it will not do under a warm wall without protection. (H. B.).—No. 1. *Ruscus racemosus*, or *Alexandrian Laurel*. No. 2. *Galearia uniflora*, a greenhouse underbrush. No. 3. *Phlox*, but we cannot determine which.

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For Selections of Ranunculus, Anemone, Gladioli, English Iris, Imported Dutch Hyacinths, Crocus, and other Roots; also, for Collections of choice Stove, Greenhouse, Winter flowering Herbaceous, Rock, and other plants, see Advertisements in THE COTTAGE GARDENER, of October 28th, and November 4th, 11th, and 18th.

For particulars, see "Autumn Catalogue," supplied for three postage stamps.

BASS & BROWN, Seed and Horticultural Establishment, Sudbury, Suffolk.

VINES FOR VINERIES, FROM EYES IN POTS.—The following varieties are all true to name, propagated from bearing trees on the premises. They are from three to four feet in height, with well-ripened shoots, grown under glass, and from two to three years old. 3s 6d each, except those priced.

Barbarossa, 5s.
Black Prince
Black Prince, Hamburg
(Williams).
Chaptal, (Hans).
Chasselas Musqué (or St. Al-
Chasselas, rose.
Frontignan, black.
do. grizzly.

Frontignan, white.
Hamburg, black.
do. the Pope, early.
do. Mill Hill, 5s.
do. Wilmot.
Malvasia, or Grove End Sweet
Water.
Muscadine, Royal.
Muscat of Alexandria.

Noir d'Espagne.
Purple Constantia.
Raisin de Calabre.
Saint Peter's, Oldaker's.
Sweet Water, Dutch.
Sweet Water, Prolific.
Tokay, Charlesworth.
White Nice.
White Roman.

Vines for Walls, from Eyes, not in Pots, from five to seven feet, 1s 6d each, except those priced; these are all hardy and early kinds.

Burgundy, or Miller.
Early Hardy Red.
Knight's Sweet Water, great
bearer.
Muerod's Early White, do.

Madeleine Blanche, very early.
Madeleine Noir, do.
Mignonne White Cluster
(Williams).
Piquepoule Noir.

Purple Fontainebleau, great
bearer, 2s 6d.
Scotch White Cluster.
White Ripling.
White Cluster (Williams).

CARRIAGE PAID TO LONDON.

THOMAS RIVERS, The Nurseries, Sawbridgeworth, Herts.

THE NEWLY IMPORTED GERMAN DOUBLE DAISIES.—A fine

and healthy stock of the above new variety of flower is now offered to the public. It is very novel and distinct in all its features, and such as will give satisfaction to all purchasers. EDWARD TILLEY has selected 50 of the best of the varieties out of the 100 varieties imported, and can send them out in any quantity, from a dozen and upwards, all true to name. These will be found to surpass everything for edging borders, &c., and also, if planted in a bed, will equal in variety that of a fine Ranunculus, and is frequently taken for such by many who have seen them in bloom. The whole of them are grown in pots, therefore will ensure a certain growth when transplanted. Price 3s per dozen, postage and package free to any part, or 4s 1 per 100, hamper and package free.

MYOSOTIS AZORICA.—A large and healthy stock of this delightful little flower (for particulars of which see article on same, by "Alpha," at page 795 of *The Gardeners' Chronicle* for Nov. 13, 1852); also, fine plants of **MYOSOTIS VANGELICKI**, which is another splendid variety. Both are particularly adapted for pot culture: the former is a very dark blue, the latter, a beautiful light blue; persons once growing them will never be without them. Price 3s per dozen, post free.

OTHELLO CLOVE CARNATION.—A few pair of this unique variety are still left, and will be forwarded to any part at 3s 6d per pair.

VIOLA ARBOREA (true), 6s per doz.; and **RUSSIAN SUPERB VIOLETS** (true), 3s per doz.

HOLLYHOCKS.—Seedlings saved from all the best varieties sent out for the last three years, 4s 1 per 100, or 11s for 50 plants. They are fine strong plants, such as will bloom fine, and give every satisfaction next season.

A TREATISE on the Nature, Mode, and Cultivation of the VIOLET, giving every direction for its continual blooming the whole of the winter, &c., and adding in many respects those who have already grown them, as it contains several distinct plans to grow Violets. Purchasers to the amount of 5s will have the Treatise included, or sent post free to any part, on receipt of 12 penny stamps. See *The Gardeners' Chronicle* for Nov. 20.

STRAWBERRY PLANTS.—Prolific, 3s per 100; Goliath, 3s per 100; Alice Naud, 3s per 100; Eleanor, 5s per 100; British Queen, 3s per 100; Eliza, 3s per 100; Britannia, 5s per 100; Globe, 3s per 100; Black Prince, 5s per 100; Trollop's Victoria, 4s 1 per 100, or 3s per dozen, post free.

The Hollyhock and Strawberry Plants will be sent in hamper or package, free, and when a quantity is ordered, plants will be sent over to compensate the cost of carriage.

The whole, or any part of the above, can be sent postage and package free on receipt of the amount by a Post-office order or penny postage stamps.

EDWARD TILLEY,
Nurseryman, Seedman, and Florist, 14, Abbey Church-yard, Bath, Somersetshire.

THE COTTAGE GARDENER—ADVERTISEMENTS.

COCHIN-CHINA FOWLS.—

Messrs. BRETHERTON & HARRISON respectfully inform the Public, that they have been instructed to Sell by Auction, in the Gallery of their Repository, No. 1, Cheapside, Birmingham, on Monday, the 13th of December next, commencing punctually at Twelve o'clock (without reserve), upwards of 100 Cochin-China Fowls, the genuine property of a Gentleman discontinuing keeping that variety.

Persons desirous of entering Poultry for this day's Sale, are solicited to make immediate application, in order that descriptions may appear in Catalogues, which may be obtained at the Repository one week prior to sale.

ANNUAL SALE OF FAT CATTLE, SHEEP, PIGS, COCHIN-CHINA

and other FOWLS.—Messrs. BRETHERTON & HARRISON respectfully inform the Public, that a Sale of Fat Cattle, Sheep, Pigs, and all kinds of Fancy Poultry, will take place at their Repository, on the 18th of December next, being the day following the Great Annual Exhibition at Bingley Hall, Birmingham.

Entrances to be made one week prior to the Sale, in order that particulars may be given in catalogues.

N.B.—Messrs. B. and H. will take charge of any Cattle for their Sale immediately after the Show, and every care will be taken in removing them.

SONG-BIRDS.—MESSRS. JESSOP,

BROTHERS, Florists, &c., Cheltenham, have now a good selection of Belgian and other Canaries, in full song. Price 10s 6d each, travelling cage included.

Also, a few very handsome Pied Goldfinch Mules, 20s each.

A General Collection of Foreign and other Cage Birds.

TRUE AROMATIC SCENTED CLOVE CARNATION.

Messrs. JESSOP, BROTHERS, Florists, &c., Cheltenham, have a considerable stock of this deservedly esteemed Carnation, now so rarely to be met with. Price, 6s per dozen, package included.

THE BIRMINGHAM CATTLE

SHOW.—MAPPLEBECK and LOWE, Machinists and Manufacturers, respectfully invite Agriculturists and others who may visit the Birmingham Cattle and Poultry Show in the week commencing December 14th, to inspect their very extensive collection of Agricultural Implements, in the Smithfield, and Gloucester-street Warehouses; also many Choice Works of Art, and every kind of useful Hardware, in their Furnishing Ironmongery Show Rooms, Bull Ring. Wholesale and Retail.

TO THE SEED TRADE.—

ABRAHAM HARDY & SON'S Priced Wholesale Catalogue of home-grown Seeds, and earliest Seed Potatoes, is now ready, and may be had on application, enclosing one penny stamp.

Maldon, Essex, December, 1852.

Just published, price 1s, post free 1s stamps.

GLENNY'S GARDEN ALMANAC

for 1853, a sale guide to the amateur cultivator, not only as to what he should grow, but where to get it, and how to grow it.

"A deal of information useful to small gardeners."—*Gardeners' Chronicle*.

London: GEORGE COX, King Street, Covent Garden.

HOLLOWAY'S PILLS FOR RHEUMATIC

PAINS AND THE CURE OF TIC DOLOROUS.—Mrs. Harriet O'Donnell, a lady of property, residing in Union-street, Plymouth, states in a letter to Professor Holloway, dated Nov. 10, 1852, that she was afflicted for nearly five years with frequent attacks of the dolorous and rheumatic pains. Medical aid had no effect whatever in alleviating her sufferings. The attacks left her in a weak and debilitated condition, and her bodily health was very much impaired. In this deplorable state she was induced to try Holloway's Pills, and by persevering in their use, the pains became gradually diminished, and ultimately she was restored to perfect health and strength.

Sold by all Druggists, and at Professor Holloway's Establishment, 244, Strand, London.

TORQUAY POULTRY EXHIBITION.—An Exhibition of Poultry,

Open to all England, will be held at Torquay on the 14th and 15th of January, 1853, particulars of which will be shortly advertised.

Torquay, November 22nd, 1852.

A. PAUL, } Honorary

J. C. STACK, } Secretaries.

THE BIRMINGHAM CATTLE AND POULTRY SHOW, 1852.—The

Fourth Great Annual Exhibition of Fat Cattle, Sheep, Pigs, and the various kinds of Domestic Poultry, will be held in Bingley Hall, Birmingham, on Tuesday, Wednesday, Thursday, and Friday, the 14th, 15th, 16th, and 17th days of December. The Private View and the Annual Dinner on Tuesday, December 14.

Admission—on Tuesday, 5s; and on Wednesday, Thursday, and Friday, 1s.

SALISBURY AND WESTERN COUNTIES THIRD ANNUAL

EXHIBITION OF POULTRY.—The above Annual Exhibition will be held, in conjunction with the Salisbury and Western Counties Cattle Show, on Monday, December 13th (the day previous to Gilted Tuesday). Subscribers of 10s each will be entitled to Show Six Pens, but not more than Two Pens in a Class. The poultry must be in the yard by eight o'clock on the morning of the Show. To parties who live at a distance arrangements are made to receive the birds on Saturday, the 11th proximo. All entries to be made (on the forms only) on or before the 8th December. Prize Lists, Forms of Certificates, &c., can be had, post free, on application to Salisbury, November 22nd, 1852.

T. PAIN Honorary Secretary.

THE LONDON INDISUTABLE LIFE POLICY COMPANY,

73, Lombard Street, and 24, Connaught Terrace, London.

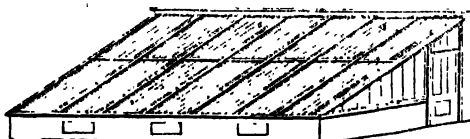
TRUSTEES.—J. Campbell Renton, Esq., M.P.; Richard Malins, Esq., Q.C., M.P.; Richard Spooner, Esq., M.P.; James Fuller Maddox, Esq.; William Withermore, Esq.

The Policies of this Company being Indisutable (in terms of the Deed of Constitution, duly registered), are Transferable Securities, their validity not being dependant, as in the case of ordinary Policies, upon the import of passed and perhaps forgotten circumstances, and Office documents. Used as Family Provisions, they relieve the Assured from all doubt and anxiety as to the future.

ALEXANDER ROBERTSON, Manager.

HORTICULTURAL BUILDING AND HEATING BY HOT WATER.

Warranted best Materials and Workmanship, at the lowest possible prices.



J. WEEKS & Co., King's Road, Chelsea, Horticultural Architects, Hothouse Builders, and Hot-water Apparatus Manufacturers. The Nobility and Gentry about to erect Horticultural Buildings, or the Hot-water Apparatus, will find at our Hothouse Works, King's Road, Chelsea, an extensive

variety of Hothouses, Greenhouses, Conservatories, Pits, &c., erected, and in full operation, combining all modern improvements, so that a lady or gentleman can select the description of House best adapted for every required purpose. The Hot-water Apparatus (which are efficient and economical), are particularly worthy of attention, and are erected in all the Houses, Pits, &c., for both Top and Bottom Heat, and in constant operation in the Stoves. The splendid collection of Stove and Greenhouse Plants are in the highest state of cultivation, and for sale at very low prices. Also, a fine collection of strong Grape Vines in pots from eyes, all the best sorts. Plants, Models, and Estimates of Horticultural Buildings; also, Catalogues of Plants, Vines, Seeds, &c., forwarded on application.

J. WEEKS & Co., King's Road, Chelsea, London.

THE ONLY STOVE WITHOUT A FLUE, for which Her Majesty's Royal Letters Patent have been granted.

Prospectuses, with Drawings, forwarded free.

Plain, 12s to 25s. Ornamental, 31s 6d to £6 6s.

Stands for Stoves, 2s 6d, 3s, and 5s, each.



CAUTION.—An Injunction having been granted by the Vice Chancellor in the case of "NASH v. CARMAN," restraining the Defendant from making or selling any colourable imitations of the Plaintiff's Stove or Fuel, the Public is respectfully informed that the "JOYCE'S PATENT STOVE," "WITHOUT A FLUE," and the "PATENT PREPARED FUEL," can only be obtained from the Proprietor or his authorized Agents. Every genuine Stove has the Proprietor's name and address on a brass-plate on the front:—

"SWAN NASH, 253, Oxford Street, London."

JOYCE'S PATENT, for warming Halls, Passages, Harness-rooms, Greenhouses, Water-closets, &c., &c. The above Stoves do not emit smoke or unpleasant smell, and will burn without attention or replenishing from 12 to 48 hours. In use daily at the Sole Proprietor's, SWAN NASH'S, Ironmonger, 253, Oxford Street, and at the Depot (City), 119, Newgate Street, London; and to be had from the principal Ironmongers in Town and Country.

PATENT PREPARED FUEL, 2s 6d per bushel, only genuine with the Proprietor's name and seal on the sack. SWAN NASH, 253, Oxford Street, and 119, NEWGATE STREET.

N.B.—Sole Maker of the PORTABLE VAPOUR-BATH, for Families and Travellers, &c., &c., as recommended by the Faculty, complete with large Clock, £1 11s 6d. SYRPHON AIR-VENT BEER AND WINE TAPS, 3s 6d; electro-silvered, 5s 6d.

THE SUREST WAY TO OBTAIN THE PUBLIC PATRONAGE IS

TO DRESS WELL IT.—As many appeals we made to the public by clothing establishments, SAMUEL, BROTHERS, are anxious to draw particular attention to their system of business, which has for years been carried on with success. Confidence between buyer and seller is the "oil of business," and is only requisite for those who have not as yet been patrons to Samuel, Brothers' establishment to acquire amongst their friends, and they are sure to obtain a satisfactory reply, as there is scarcely a man in the United Kingdom but there reside some patrons of the noted firm of Samuel, Brothers, of Ludgate-hill. The system in the Bespoke Department is to charge separately for the cloth from the making and trimming. The Ready-made Department contains the largest stock of gentlemen's coats, paletots, vests, and trousers, of the newest styles, and equal to bespoke—an advantage not to be obtained at any other establishment. Superior Cloth Dress Coat, 20s to 30s; Saxony ditto, 33s to 42s; Frock Coats, 3s extra; the Oxonian or Business Coat, 18s; Saxony Llama Paletot, silk-lined, 34s to 38s; Black or Fancy Trousers, 8s to 20s; Boy's Suits, 22s; Vests in endless variety. Patterns, Tables of Prices, Plate of Fashions, Guide to Self-measurement, sent free.—SAMUEL, BROTHERS, 29, Ludgate-hill.

WEEKLY CALENDAR.

M D	W D	DECEMBER 9—15, 1852.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock aft. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
9	Th	Red-throated Diver comes.	30.189—30.091	54—52	S.W.	—	56 a. 7	49 a. 3	5 25	28	7 14	344
10	F	Wild Swan comes.	30.037—29.981	63—38	S.	—	58	49	6 52	29	6 46	345
11	S	Groatbeak seen.	30.521—30.366	27—27	W.	—	59	49	sets.	30	6 18	346
12	Sun	3 SUNDAY IN ADVENT.	30.516—30.442	38—39	N.W.	—	5 11	49	5 a. 8	1	5 50	347
13	M	Lucy.	30.404—30.389	44—37	E.	—	0	49	6 15	2	6 22	348
14	Tu	Stinking Hellebore flowers.	30.472—30.416	41—35	E.	—	1	49	7 27	3	4 53	349
15	W	EMBER WEEK.	30.437—30.387	40—36	S.	—	2	49	8 42	4	4 23	350

METEOLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 46.2° and 34.1° respectively. The greatest heat, 61°, occurred on the 13th in 1842; and the lowest cold, 11°, on the 13th in 1846. During the period 106 days were fine, and on 69 rain fell.

WINGED TOBACCO PLANT.

(Nicotiana glauca.)



This is a tender annual, and a native of South Brazil. It belongs to the Natural Order of Nightshades (Solanaceae), and to Pentandria Monogynia of the Linnaean system. Like other tender annuals of the same family, the seeds require to be sown early in spring, on a gentle hotbed, and the seedlings, when they have three leaves, to be pricked out into small pots, and kept under the same frame, and so be moved to their blooming place after potting in May. We extract the following from Paxton's Flower Garden:—

"We translate literally the account given of this plant by Link and Otto. 'The stems are from four to five feet in height, branching, with distant, glandular hairs. The leaves are from three to four or more inches long, and from one to two inches broad; the upper ones are smaller; they are all decurrent and form narrow wings on the stem, obtuse, and with a small callous point, but a little repand at the edges, serrated toothed, the teeth having also little callous points, on both sides rough with small somewhat closely pressed hairs, and at the edges furnished with distant and glandular hairs.

The flowers are placed rather far apart from each other on a raceme; the lower pedicels are one inch long, the upper ones are shorter. The rough calyx is not quite an inch in length, tubular; its teeth are long and very narrow. The flowers are white, and sweet-scented; the tube from two to three inches long, a little expanding at the top; the teeth of the limb, eight lines in length, are oval, somewhat expanded, obtuse. Stamens as long as the tube. Style somewhat longer. Capsules oblong. The seeds of this plant were sent by M. Sello, in 1827, from Brazil. They should be sown in the spring in pots, and the seedlings should be planted out in the open ground when the frosts are gone. The plant is hardy, and may be kept in winter in a temperature of from 38° to 43° Fahr., and as such plants as are strongest flower best and produce most seeds, they should be so treated. The soil should be light, but rich, and mixed with sand. The large, white, odoriferous flowers, forming nice-looking tufts, render the plant suitable for bedding-out. The flowers close in the day-time and hang down, but open at night. If the weather is cloudy they open as early as five, p.m., but if clear, not before six and a-half, p.m.; in like manner they shut in the morning at six if the weather be clear, but not before seven if it be overcast."

"Such is the account given by Link and Otto, of a plant which we think is beyond all doubt what Sir Henry Willeck found cultivated in Persia, and sent to England as the source of Shiraz Tobacco; in consequence of which it was called *N. persica* by one of us, and, according to M. Walpers, *N. decurrens*, by Bishop Agardh. We must, however, observe that the Persian plant was not observed to be a perennial; nor do the leaves appear to have been so distinctly decurrent as is represented in the accompanying figure: but the specimens which have been preserved show that the leaves were somewhat decurrent, even near the summit of the flowering stem. This identification of plants supposed to be distinct, leads to the inquiry of how a South Brazilian plant came to be cultivated in Persia as Tobacco? and also whether any Brazilian Tobacco is manufactured from it? We trust that some one will be able to answer these questions, as well as many others connected with the history of commercial Tobacco; as, for instance, is any Havannah Tobacco prepared from *N. amplexicaulis*, as George Don reported? Is the white-flowered Guatemala Tobacco a species distinct from the Red Virginian, *N. Tabacum*? Are the red-flowered Tobaccos all varieties of *N. Tabacum*? or do they belong to different species, as some pretend? What yields the pitchy Tobacco of Iatakia; or the mild Tobacco of Syria? The Djebel seems to belong to *N. Tabacum*. Is it true that *N. paniculata* is cultivated in the East? How came *N. rustica* to be grown in Egypt and Tunis, where it produces the fragrant but strong Tombaki Tobacco, which was shown at the Great Exhibition of all Nations? Of what country is *N. rustica* certainly a native? All these are interesting questions, to not one of which we believe can a satisfactory answer be found in books. *N. glauca* is lost in English gardens, but might perhaps be recovered from Berlin."

It is a paradoxical but explicable Kentish proverb, that "Tenterden church steeple was the origin of the Goodwin Sands;" and we have heard of a shipwreck being shewn satisfactorily to have been caused by the vessel

having sailed on a Friday; but out of five letters, all accusing Guano of being the cause of the Potato murrain, we cannot trace even the pretence of a reason, much less of evidence, on which our five correspondents

found their opinion. One of them, indeed, ventures to say, that "it was never intended that such a mass of excrementitious matter" should be brought into this country; and the inference intended thence to be drawn is that the Potato murrain is a judgment upon us for having done so! We must be excused for characterising such an observation as so absurd, that we think the writer, when he remembers that the disease is in a hundred countries where the use of Guano is unknown, will laugh at his own hasty illogical conclusion.

We have no intention to re-enter, at present, upon the subject of the Potato disease, but we have mentioned the subject of these letters that it may indicate why we think it necessary to explain the cause of Guano being so powerful a fertiliser.

It is a fact, which we pointed out in the "Gardener's Magazine" (vol. iv. 81), about twenty-five years since, that manures are powerful in proportion to the quantity of ammonia which they contain. Night soil, we then observed, one of the most beneficial of manures, surpasses all others in the abundance of its ammoniacal constituents in the proportion of three to one; and the nearer any animal approaches to man in the nature of its food, the more fertilizing is the manure which it affords. We added our belief that such power of promoting the vigour of plants arises from the stimulating qualities of the ammonia those manures contain, adding, that we had no doubt that a languishing plant, such as orange-trees, as they usually arrive here from Italy, might be aided in recovering by having their stem and branches steeped in a tepid weak solution of carbonate of ammonia, and by suspending an uncorked phial, containing some of the same solution, among its branches when planted. These opinions are strongly confirmed by the recent experiments of M. Ville, published in the "Comptes Rendus."

When we wrote as above, the use of *Guano* as a manure was unknown among our cultivators of the soil; and it affords another powerful testimony to the truth of our opinion, that manures are powerful in proportion to their richness in ammonia. Professor Way has analysed the Guano brought from various localities, and it is certain that in the following list the specimens are superior as manures, exactly in the proportion they excel each other in ammonia.

Peruvian	17.41 per cent.
Isaboe	7.30 "
Patagonian	2.51 "
Saldanha Bay	1.62 "

So powerful are the effects of the ammonia, that about four hundred weight of Peruvian is a quantity quite sufficient for manuring an acre, and of the others, quantities just proportioned to their ammoniacal constituent. This indicates, unmistakably, the importance to the cultivator of obtaining genuine Guano, and he cannot feel confidence that he will obtain such security, unless he purchases from long-established dealers, who have a business to lose if it is proved that they have deceived their customers.

The increasing demand shows that the value of Guano is confirmed by every year's experience; and we hail the fact as a proof that British cultivators, true to our national character, meet increased difficulties by increased efforts to rise superior over them. The quantities imported in the last five years are as follows (*Farmers' Almanac* for 1853, p. 21):—

	1847	1848	1849	1850	1851
Tons.,	82,392	71,414	83,130	116,925	213,016

In Guano the allotment-gardener and the small market gardener have a powerful friend. Want of capital, and of the means of keeping much animal stock, renders a deficiency of manure their chief difficulty, and Guano releases them from it. We have now seen it employed almost for every important garden crop; and we can testify that it helps them to as excellent a growth as would be obtained by applying twenty times their weight of any farm-yard dung. All the Cabbage-worts, Spinach, Celery, Asparagus, Strawberries, Roses, and many other garden plants, we have seen grown without any other manure being added, and we can testify that never was a finer produce obtained, even with a lavish expenditure of the gardener's usual compost. Let all gardeners bear this in mind, and when ever inconvenienced by a deficiency of manure, let them remember that they can purchase the best Peruvian Guano for ten shillings per hundred weight.

COVENT GARDEN.

Ere this, our readers will have had time to consider the proposition we made as to the economical plantations of fruit-trees; and taking it for granted that, with some of them at least, it has met with some degree of favour, we continue the subject.

We have already given a list of those varieties of Apples which we would recommend for dessert use, and which are likely to be most remunerative when taken to market. This week we shall devote our attention to those adapted for culinary purposes; and, carrying out the same plan as that on which we set out, by taking them in their order of maturity, we shall now commence with—

1. *Manks Codlin*.—One of the earliest, best, and most abundant-bearing culinary Apples we have. We have chosen this variety in preference to some of the other early Codlins, because the tree is of a very hardy constitution, succeeds well in exposed situations, and is not very nice as regards soil. This being of a small habit of growth, it would be well to graft it standard high on some other variety of vigorous growth, and which would make a stronger stem than the *Manks Codlin* would if trained up of itself.

2. *Early Julien*.—To many the name of this Apple will be new, for it is not so well-known as it ought to be, and consequently not so extensively cultivated. It is, nevertheless, a variety of some standing. In the appearance of the fruit it has some resemblance to the *Hawthornden*, but is as superior to that variety as the

Hawthornden is to a turnip. Its flesh is firm and crisp, very juicy and brisk, with a very strong and rich balsamic flavour. The tree is a very early and abundant bearer, almost, if not quite, as much so as the *Hawthornden*. It is ripe in the middle of August, and lasts during the greater part of September. It may even be used in the dessert.

3. *Nonesuch*.—This is a very old and very beautiful English apple, and well suited for orchard planting for the supply of markets, as the tree is an early and great bearer, and the high colour of the fruit is very attractive. It is one of the best for preserving, and makes the finest apple jelly. It is ripe in about the second week in September, and lasts during October.

4. *Wormsley Pippin*.—Among all the varieties Mr. Knight raised, we question if he got a better and more generally valuable apple than this. Besides being of a very large size, and first-rate in every respect for culinary use, it is even a good dessert apple, being crisp, brisk, sugary, and aromatic. But perhaps its greatest qualification is the wide range of country for which it is adapted: it being as easily cultivated in Scotland as in the south of England. It comes in use in September, and lasts during October.

5. *Cellini*.—This is a sort, too, which is deserving of greater popularity. It is handsome and beautifully coloured, and of a good size. It is particularly brisk, juicy, and crisp, with that strong balsamic flavour which is peculiar only to some apples. It is in use during October and November. The tree is a strong and capital grower, and a most abundant bearer. We have only just to look out of the window where we are now writing to see a Cellini tree, about five feet high, which this season was as full of apples as it could hold.

6. *Golden Winter Pearmain*.—This is what is known to most people by the name of *King of the Pippins*, which is, in fact, a *decoy name* given to this variety by a London nurseryman, that he might for a time secure the sale of it to himself. This variety is now pretty well known, and is quite an established favourite, especially in Covent Garden and the other London markets. It is a pretty and handsome apple, and is in use from October till January.

7. *Beauty of Kent*.—One of the most magnificent-looking, and one of the best culinary apples which this country has ever produced. It grows to a great size, and is a fine sauce apple. The tree, however, requires a warm and rather light soil. The fruit is in use from October till February.

8. *Dumelow's Seedling*.—There are few growers now-a-days who do not know the *Wellington Apple*. This is it. It is also sometimes called *Normanton Wonder*. It is a very pretty apple, of good size, and exceedingly firm and weighty. It is one of the very best sauce apples, and well known now in almost all markets. The tree is a strong and vigorous grower, and a good bearer.

9. *Winter Pearmain*.—This, for a cottager's garden, is one of the best we know. It will grow almost anywhere and everywhere, is a most beautiful apple, and

the tree is a very abundant bearer. It is an excellent variety for apple-pies, and is one of those which do not fall away to pulp, but which, though ever so well cooked, still retains the form of slices the same as when first put into the pie. It is in use from November till April, and is a good keeper.

10. *Striped Beefing*.—Very few of our readers know, or ever heard of this variety. The sooner they make its acquaintance the better. We have already exhausted our superlatives on the *Beauty of Kent*, otherwise we would have concentrated all on this. It is an immensely large apple, being generally never less than four inches diameter, beautifully coloured, and the most excellent of the best culinary apples. When baked by itself in a tin, or on a plate, which you will, it falls, and gives out a perfect syrup of rich, sugary juice. It is in use from December till May.

11. *Winter Majetin*.—In appearance this very much resembles the *London Pippin*: but the latter, in ripening, attains a yellow colour, while the former may be kept till May or June, and will always preserve its green colour. It is a very hardy variety, and bears very abundantly.

12. *Gooseberry Apple*.—This is a very valuable apple, not only for its long keeping, but its very fine and peculiar flavour, which, when cooked, very much resembles that of the Gooseberry. It is now coming much into cultivation about London for the supply of the markets, and is a most profitable variety to grow. It comes into use in December or January, and keeps as late as June or July.

We have now completed our list of Apples, and here we leave the subject for the present. Next week we shall, on the same plan, furnish a list of Pears.

We announced, some weeks ago, that Apples must rise in price before long; and now that time has arrived. During the past week, even although the weather has been so bad, and trade generally dull, the rise has been very considerable. Anything like good samples of kitchen sorts made as much as 7s. and 8s. per bushel, and good dessert 10s. We did not observe anything new among them besides what we have already noticed in former reports. There are still, however, plenty of *Blenheim Pippins*, *Alfristons*, *Newtown Pippins*, *Lady Apples*, and a few *Ribstons*. We observed, also, a small parcel of the old *Calville Blanche*, now very seldom seen in this country, but a great favourite on the continent. These were imported specimens. Among Pears there is not much new, except a few *Ne Plus Meuris*, a very rich and highly-flavoured pear of the very first rank. It was raised by Van Mons, and named after his gardener Meuris. There are also some *Nelis d'Ivry*, *Beurre de Ranc*, *Glout Morceau*, and very large specimens of imported *Chauvontel*: all of them make from 3s. to 4s. per dozen.

POTATOES are rising very much in price, even common French kinds of inferior quality are making as high as 45 per ton. *Regents*, of home growth, are £7 10s., and every day they are expected to rise considerably higher.

It is the opinion of good judges that there will not be enough to last out the season.

OUR FLOWERS consist of *Chrysanthemums*, *Camellias*, *Chinese Primroses*, *Fuchsias*, *Heliotropes*, *Heaths*, *Roses*, *Yellow Calceolarias*, *Mignonette*, and *Blue Violets*.—11.

GOSSIP.

In a recent number, p. 91, of the present volume, an inquiry is made after *Dixon and Kerr's Ornamental and Domestic Poultry Book*. We have reason for suspecting that Mr. Kerr is an American, who wrote some time since to the Rev. Mr. Dixon, and that the work referred to is merely a reprint of Mr. Dixon's well-known work which we noticed last week, and we warn our readers from it accordingly; for it would be unjust to the original author to purchase what is pirated, if our suspicion be correct.

Even the little island of *Mauritius* has its Royal Society of Arts and Sciences, and we are glad to see that gardening receives no small portion of its attention. At a recent meeting, over which the Governor presided, it was there stated that *grafting* had been successfully introduced by the society's means, and that two hundred scions had succeeded admirably. Twelve new varieties of the *Pine-apple* were introduced. *Sugar*, however, as might be expected, was the principal object, and we must quote on this subject from the Hon. Mr. Rawson, Treasurer-General of the island. He said:—

"A specimen of that which makes the wealth of the colony (pointing to a magnificent cane on the table sent by Mr. Convois of Black River), of a size such as no gentleman here ever before witnessed, lies before you. It measures eighteen French feet, and contains fifty-two knots.—There is (said the speaker proudly) the material of our wealth and prosperity. Here is, your Excellency, an evidence of the height to which we have attained, a height to which I hope all planters in this colony are aspiring, and which, if most of them are successful in reaching, will certainly place us at the head of the sugar-growing colonies. Sir, and gentlemen, the medal which I hold in my hand was given to Messrs. Webb and Co. for a sample of the best sugar presented at the Great Exhibition in London. I think I am correct in saying that they are very, very near getting the Council medal for their production, which, had they obtained, would have been evidence of our sugar being the finest that was exhibited on that celebrated occasion. However, they were second, if not entitled to be the first. Here, your Excellency, is the beautiful medal (handing it to the Governor) which was awarded to them, a medal which ought to be an object of pride not only to Messrs. Webb and Co., but to all the planters, and to every man in the community who takes an interest in the welfare and prosperity of the colony. (Applause)."

But the Mauritians, we observe, also have their *Poultry Shows*, and here is an extract from a report of what was exhibited, and with this extract we will conclude:—

"In Poultry, also, there was great competition, and very superior specimens of *Crook-bred* were exhibited; we particularly noticed those of Mr. Douglas (prize), Mr. Richardson, and Mr. Marie. There were also some fancy fowls of great beauty, and some magnificent capons, which, however, were unrewarded by any prize. We must not pass over Mr. Robinson's superior breed of *Rabbits*, which well deserved the prize awarded; nor Mr. Oliver's *Cape Geese*; nor the

monster *Turkey*, weighing, we learnt, twenty-five pounds! What a mine of trifles it would—but we abstain from depicting 'a sight to dream of not to see,' and adjourn the subject till the December show, which, we hope, will abundantly surpass all its predecessors."

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

LONDON, FLORICULTURAL (Exeter Hall, Strand), Dec. 14†, and 17th December.
SOUTH LONDON (ROYAL), Dec. 10.

POULTRY SHOWS.

BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
CORNWALL (PENZANCE), January 10th, and 11th. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)
HONITON, January 12th. (Sec. H. K. Venn.)
SALISBURY AND WESTERN COUNTIES, December 13. (Sec. T. Pain, Esq.)

† For seedlings only.

RENOVATION OF FRUIT-TREES.

WHEN we cast our eyes around, and when we call to mind what a vast number of fruit-trees we have met with, or heard of, which disease or unfruitfulness render unworthy of preservation if incurable, it seems astonishing that, after all the books that have been written, all the tales told, and all the fruitist's lore made public, as well as the practical observations of a very many years brought to bear on the subject, such should still be the case. But so it is; and we think some service may be done by dealing out another blow or two at prevailing errors, and pointing to great facts committed with the *root itself*; to the due culture of which all pruning and training must ever hold a secondary position.

Let no one suppose that we wish to decry in sweeping terms the genuine pruner's labours; this time-honoured craft must still hold a place in the annals of horticulture; and we look back with a sort of instinctive veneration on some genuine "early Yorks" whom we knew in our 'prentice days, and who used to sally in the "rest-season," knife in hand, with an expression of countenance fully exhibiting an inward consciousness of their dexterity, and of the great importance of their mission. These were amongst the most patient of men. Years rolled past, and still they pruned on with the utmost precision; "spurring back" with all the exactitude of a walking-stick manufacturer. Indeed, we knew of two of these worthies who were first-raters at walking-sticks, and no marvel either. And fruit *might* occasionally be seen on such trees, which was strange enough; the Pears would occasionally take their stand in bunches at the extremities like tassels; and it was noted, as an odd phenomenon, that the Pears generally commenced where the pruner left off! But our present business is not with wall-trees or Pears alone, but to point to root-culture, for the improvement of unsatisfactory fruit-trees in general; and in order to know what we are about, we must attempt a classification of the evils proposed to be remedied.

As this subject will not be disposed of in one paper, we are in duty bound to prepare the interested reader for it; and the following classification of evils will at once show the breadth of the subject:—

- 1st. Aged trees.
- 2nd. Trees weakened by bearing.
- 3rd. Diseased trees.

4th. Ramblers.

5th. Shy kinds.

6th. Gross, or plethoric young trees.

Before proceeding farther, let us point to the causes of these evils; let us give them names, in order to facilitate a due study of the various causes. The principal will stand as follows:—

1st. Soils of improper texture.

2nd. Soils too rich.

3rd. Too much depth of soil.

4th. Ungenial subsoils.

5th. Atmospheric considerations.

In the consideration of faults in *texture*, we have at once the too light, and the too stiff, or adhesive; the first leading to a kind of leafiness in the tree, much averse to the production of first-rate fruit, or to a permanency of habit. On the other hand, there are the clayey loads of extreme tenacity; these, by holding water too long, bring on a debility of constitution, equally averse to profitable results.

Soils too rich.—Most of our readers know by this time that much manure is prejudicial to fruit-trees in general, as inducing an overgross habit averse to the production of blossom-buds; and in addition, in the case of trained or dwarfed trees, causing a most unwarrantable amount of labour to the pruner. There are some exceptions: the Gooseberry and the Black Currant will bear high manuring on most soils; and, indeed, a few exceptions exist in the varieties of some of our fruits. Thus the Manks Codling, one of our very best kitchen apples, will succeed in a rich soil, which would drive a Dumelow's seedling or Normanton Wonder wild. But, be it remembered, that this Manks Apple has the peculiar property of producing bloom-buds freely on the annual shoots; which, of course, creates a greater demand on the root.

Too great a *depth* is the next in our brief review of the evils; the tendency of this is to place the tree beyond that wholesome control which has proved of so much service in later years. We are quite-prepared to admit, that in the ordinary orchard, where the object is to produce huge and long-enduring trees, which may pass on to our heirs, without either manuring or pruning, that the soil can scarcely be too deep, if sound; or in other words, if waters can pass freely away at that low level. This is altogether another affair from the dwarfed and early-bearing tree of the garden. And as to the merits of the dwarfing system, when duly carried out, what are the results as compared with the former position of affairs? Then the possessor of a little suburban garden might have a huge Bergamot Pear or a Jargonelle, perhaps a Swan's Egg; and then there would be the great, old Russet Apple-tree, a gnarled old Codlin, &c., &c.; and these being in bearing, he was therewith tolerably content; for on being advised to plant others, it was ten to one some over-zealous gentleman set him at "composts," and gave the ill-fated tree fifty per cent. more manure than the objects warranted. But now, in such a garden, it is becoming no uncommon thing to see an extensive collection, and that, too, in a small compass; in fact, as many kinds as the proprietor can desire.

Ungenial subsoils are not the least of the evils connected with fruit-culture; we speak of those which have received no assistance from the cultivator. Wet and sour bottoms bring on betimes all the effects of age on trees, decayed points, boughs smothered with moss, and a generally lean and debilitated condition. No fine and high flavoured or good-keeping fruit can be expected under such circumstances.

Atmospheric considerations.—Of course an artificial atmosphere is not to be expected out-doors; but if we cannot fit the atmosphere to fruits, we can adapt the selection to peculiar conditions. This is a portion of our subject which has never yet received a fair consider-

ation, even by practical men; it is, however, of much importance, and for the last thirty years—during which period this question, as one of note, has constantly acquired strength—we have seen quite sufficient to confirm the opinion, that it will be well for all parties to give it a consideration. If any reader doubts this, let him try to account for the singular and notorious fact, that a given apple, say A. B., which is a staple commodity in one district, should be lightly esteemed in another. It is of no use saying the soil differs. Soils, after all, are not more material as affecting fruits than the very character of the air itself; and that, it would appear, chiefly based on the degree of moisture where-with it is charged. What makes Cheshire so noted for the production of cheese—its soil? By no means. It is produced in this county from all classes of soils: reclaimed bogs, sandy uplands, and the downhill clays. We do not affirm that an equality exists as to its virtues; but this will not weaken the force of our argument. And then the Damson, almost peculiar to Shropshire and Cheshire, where every hedge-row of the cottager, whether on the clays or the sands, has its thriving Damson-trees.

In many gardens in Lancashire, and other maritime counties, it is no unusual thing to see Peach-trees, in the autumn, with most of their young shoots black and perishing with a kind of gangrene. About twenty years since, when Mr. Taylor was gardener to Earl Wilton, at Heaton Park, near Manchester, he made some new borders for Peach and Nectarine-trees, at a considerable expense, and planted them with capital trees of choice kinds. These trees made the most splendid growth imaginable; in fact, too splendid to be safe. I saw them in the month of October, and poor Taylor was quite puzzled about them; for, having lived previously gardener to the Marquis of Ailesbury, at Sheen, near Richmond, he had not been accustomed to the damp and murky skies of our tall-chimney gentlemen. These borders were twenty per cent. too deep, and sixty per cent. too rich, for the circumstances they had to battle with; and had they been planted *above* the ground level (instead of making holes for them), and the soil a simple upland loam from an old pasture, without a particle of manure on it, the probability is they would not have made half the length of shoot. Here, within thirty miles of Manchester, we never lose a shoot this way; the wood ripens as perfectly as though the trees were in a peach-house; but to be sure, our "stopping" practice has much to do with this; we do not produce wood as sport for the pruner's knife. Now it is not a matter of temperature, let people fancy or affirm what they will; of this we are perfectly satisfied. In order to oppose our argument, some might say, How can we alter the conditions of our atmosphere? We answer, you cannot; but you can alter the conditions under which your trees are situated. It is tolerably evident, that in such climes the trees both absorb more from the atmosphere, and perspire much less; indeed, the latter is the most important fact; for without a liberal perspiration how shall those elaborations freely proceed, which are doubly essential to trees from brighter and warmer climes? Thus we find these men insisting on the necessity for flued walls, by which, it need scarcely be urged, the fruit must become much more costly in its production.

It being tolerably evident, then, that the absorption of too much sap from rich and deep soils is the cause of the failure of such trees, the question is, how to avoid this gluttony? We at once answer, Give them less and poorer diet; put them, as our medical gentlemen would say, under a lowering course, if they become gross, by root-pruning or transplanting; for our readers may rest assured that the pruner's knife can never conquer such radical evils. Planting high is of the utmost importance in such cases; and if folks will have what is termed

a border, let it be above the ground level instead of below it.

Look at the north of Ireland, and, indeed, other parts of that fertile country, and examine the reasons why they cannot produce Peaches, Neotarines, Apricots, &c., like some parts of England. We were in the habit of corresponding on such subjects, some years since, with Mr. Young, then gardener to the Earl of Enniskillen, at Florence Court, where our singular Irish Yew first showed its face; a mere sport from the common Yew. In such correspondence, Mr. Y. used to give extraordinary accounts of the wild and rampant character of such fruit-trees through extreme humidity of air; not for want of warmth. Broad Beans have been quoted as six feet high, and many other things in proportion. To be sure, the want of more sun-light is a great drawback; but here we are met with another reason for the avoidance of a plethoric habit. Mr. Young has, since those days, gone to Natal, on the African coast, and if ever those pages should obtain a footing amongst the descendants of Ham, we should be right glad to hear from him. He will have a very different account to give of that climate.

In a subsequent paper we will give a detail of cases, with their treatment; and such will surely be fitting matter for the dormant season. R. ERRINGTON.

A VISIT TO THE BOTANIC GARDEN, OXFORD.

THIS is the oldest botanic garden in the kingdom, having been founded in 1632. The first catalogue of plants in it was published in 1648, enumerating two thousand species, of which six hundred were English. Dr. Robert Morison, a native of Aberdeen, was the first Professor of Botany: he was appointed in 1669. Of his three next successors little is known. In 1728, Dillenius, a German botanist, was appointed Professor, and the garden was much improved through the influence and liberality of Dr. William Sherard, who bequeathed £300 to provide a salary for the Professorship. On the death of Dillenius, in 1747, Dr. Humphrey Sibthorp was appointed his successor, and he, in his turn, was succeeded, in 1781, by his youngest son, Dr. John Sibthorp, the celebrated author of "Flora Græca." He died of consumption, in 1796, at the early age of thirty-eight, and in his will bequeathed his books and collections to the botanic gardens. The number of species collected from his manuscripts and specimens amount to three thousand. He also devised a freehold estate of £200 a-year to his own University, for the purpose, first, of publishing his "Flora Græca," and afterwards of endowing a Professorship of Rural Economy. The author of the "Flora Græca" was succeeded by Dr. George Williams, who held the Professor's chair till his death, in 1834, when the present occupier, Professor Daubney, took the reins.

I had a longing desire to visit Oxford, for two reasons; first, to make the personal acquaintance of the worthy curator, Mr. Baxter; and then to see, for the first time, the very garden from which the first ideas of the sexual system in plants was given to the world, from experiments and observations made there two hundred years ago, and before Ray or anybody else had given a thought on the subject. The cross-breeder was received at Oxford very differently from the reception given by Dillenius to Linnæus, whose name is immortalized through the sexuality of plants. Within the last few years, Professor Daubney, assisted by Mr. Baxter, the curator, has made great alterations and improvements in the arrangements of this garden, and their plans are not yet finished. I had some notion that the

Professor had a taste for flower gardening, from his remarks when I once conducted him over a fine scene in that style, but I little expected to find a better taste in the disposition of the flower beds here, along two of the principal walks, than is to be seen in a similar way at Kew. The beds in the angles of walks, at Oxford, and along both sides of the walks, in pairs, are in the best style of the art. They are so at Kew, likewise; but there are no beds in the angles of any of the leading walks at Kew, and there is an outlandish taste in placing five or six feet circles immediately behind each pair of oblong beds, which may be from twenty to twenty-four feet long, writing from memory. The botanic herbaceous plants are planted, chiefly, in circles of different diameters, cut out of the grass behind the flower-beds which skirt the walks, and the trees and shrubs are planted in long borders in such a way as to diversify the surface as much as possible, the situation being low, and without any natural undulations.

The grass garden is also in circles cut out of grass, every species having a circle for itself, and the whole bordered with medicinal plants, and the odds and ends are in borders or strips here and there over the garden. All the walls are covered with half-hardy or nearly hardy plants, and some of them are the very finest specimens in that style I ever saw, particularly a very large full-grown plant of *Spiræa Lindleyana*, on a south-east aspect. It was then in seed at the end of all the branches, and on an average, the flower branches or clusters were from twenty to thirty inches long, and of immense thickness. It must have been the next thing to the Pampas Grass while it was in flower. The plant is a very fast grower, and last year I recommended to have it made into standards, to rival the Stag-horn Sumach; but, for a cold wall, where plenty of room can be given to it, I would plant it next after *Wistaria sinensis*, and before any other deciduous plant that I can now think of. After that I would plant a strong young plant of *Aralia japonica*, about which Mr. Fish put us on the right scent the other day. The *Spiræa* I would train just like a peach-tree, and the *Aralia* I would allow to grow out from the wall, as you see figs sometimes left untrained. I now see clearly enough that this *Aralia* ought to be treated in all respects like a fig, except the close nailing. *Melanthus major* is here, and at Kew, against walls without heat, and is one of the best of the very old plants that one could plant for the beauty and sea-green of the leaves. The flowers are dull, but so full of honey, that at the Cape of Good Hope they use them for tea and coffee instead of sugar. In very hard winters this needs protection, but if the roots are saved they will soon throw up strong young wood. *Smilax Saragurilla* is of the same class, and is convenient for training here and there between specimens of larger growth.

The Olive, Christ's Thorn, (*Zizyphus Pajurus*), the Orange Orange (*Maclura aurantiaca*), the oak-leaf *Hydrangea*, *Acacia julibrissin*, a fine thing, New Zealand Flax *Convulvulus scamonium*, *Solanum crispum*, a fast grower but coarser and more common-looking than *S. jasminoides*, are all against cold walls here, with Passion flowers, Banksian Roses, and many other less hardy plants, of which they have a large stock. Also two species of a very scarce plant called *Ephedra* (*monostachya* and *distachya*). One seldom sees these two dwarf evergreen shrubs except in botanic gardens; but they are highly curious, and well worth having, as we have no other plants like them except the *Casuarinas* of Australia, or our own British *Equisetums*, or Mare's-tail.

I must also notice the Fox Grape of North America, from among this class, if only to second a suggestion that was lately made by an able writer, to the effect

that those hardy vines from North America would make excellent stocks to work our hothouse grapes on, in preference to growing them on their own tender roots as at present,—a very excellent idea as it appears to me.

After the above, I noted a few out-of-the-way plants which are suitable for a wilderness or for rough banks. *Urtica nivea*—a kind of nettle—a large, bushy shrub, with rough, broad leaves, having the underside quite white, and when they are moved about by the wind, they look singular and very interesting. Another one, of the Currant family, called *Ribes serotum*, looks as fierce and wild as a porcupine. Out of all their herbaceous plants, the two which appeared to me to be most suited for a wilderness part of a garden, were *Phytolacca decandra*, the American Poke, lately described, and *Pyrethrum serotinum*, a very scarce herbaceous plant, reaching nine or ten feet high, with stems and leaves not much stouter than those of a Michaelmas Daisy, and bearing large clusters of white composite flowers on the top, the individual flowers being also large, and easy to be seen a long way off. Whoever grows the old *Astelma maxima*, will find a good match for it in this *Pyrethrum*. Among these trees I shall notice particularly the Maiden-hair Tree, *Salisburia adiantifolia*, one of the finest specimens of it I ever saw; it is a tree that will grow as easily as a Thorn-tree, and every one who plants ought to have this one among the first. *Koeleruteria paniculata*, from China, is another of those fancy trees which every one who wishes to excel in gardening ought to plant.

In all the universities here they teach, among other things, an old Roman doctrine, which says, that "it becomes all men who aspire to excel (in gardening, let us say), to labour with their utmost might, not to pass their life" so-and-so, like so-and-so, but to let the rest of the world understand that they, at any rate, shall not be left behind in the race of garden improvements. Instead of planting ten or twenty trees of one sort, people of this caste would rather plant ten or twenty different sorts of trees, if they only knew the names of the best sorts. The *Koeleruteria* is as pretty going to rest, with its deep, yellow, pinnated leaves, as when the end of every branch is in full bloom, on large, loose panicles, bearing first, small yellow flowers, and afterwards, large, bladder seed-pods or capsules. The first tree that attracted my notice, on passing the garden-gate, was a full-grown specimen of the true Service-tree (*Pyrus domestica*) loaded with fruit; here is another tree one hardly sees in a day's march. The Manna-tree, (*Ornus Europæus*), a very, very slow-growing tree at first, is a beautiful specimen here, and so with many others, for which I have no room to-day for mentioning them.

There is a wide ditch on the south side of the garden, and a large pond near the bottom of the garden, in the same direction, and it was astonishing to me to see how many water-plants, from the stoves, they contrived to grow in them all the summer, without any more care than at first to fix them in their places. Those who doubt that most of our stove plants cannot be trusted out-of-doors in the height of summer, and through the autumn, ought to visit Oxford to see these aquatics smothering each other with their luxuriant growth.

Of an opposite family of plants, the Succulents, they have the best and cleanest-growing specimens in England, and a vast number of species of the different forms of *Aloes*, *Mesembryanthemums*, *Cuculias*, *Crassulas*, and so forth, but not many of the *Cactus* family. Many of these curious, gouty plants are enough to make one laugh to look at them. A whole row, on an upper shelf, of little, tiny *Mesembryanthemums*, their leaves fringed all round with rows of teeth, and standing in pairs facing each other, like the jaws of so many puppies of all the dog tribes, and all the cats, and other grinning creatures at full play, such as *vaninum*, *agrinum*, *vulpinum*, *lupinum*, *tigrinum*, *felinum*, *murinum*, *mustellinum*,

erminum; while *obcordatum*, *testiculare*, *muricatum*, *bifidum*, *spinosum*, *rostratum*, *tuberosum*, *moniliforme*, *taurinum*, and a dozen more of such like, put you in mind of all the drolleries in a toy-shop; and the best of it is, that you could put a score of full-grown plants of most of these into a night-cap; that a little thumb-pot is large enough to grow any one of them; that a little water once or twice a-week in summer, and once in three weeks or a month in winter, will do for them; also that silver sand will do to grow them in; but they will grow in anything: then tell me if it is not worth while to go all the way to Oxford to learn this; and yet the best part about succulent plants is not told, and cannot be told to-day. Among these succulents are two which we might call silver plants, they are so white; they are *Echeveria farinosa* and *pulverulenta*, that is, mealy and powdery-looking. There is one plant of the *Socorine Aloe*, the finest specimen of the kind, perhaps, in existence, it is so perfect all over, so bushy, so healthy, and so heavy, that four men would find it a good pull to raise it into a barrow, and yet the specimen is not bigger than a full-grown geranium at the London shows. Whether it is the air, the chalky soil, or the great attention they receive, I cannot tell; but there is nothing about London which will come near to the succulents at Oxford for vigour, symmetry of growth, and cleanliness. Perhaps *Crassula perfoliata* is as singular as any of the tribe: the leaves of this species might almost be called versatile, that is, they are so slightly "attached to the stem that they may be turned round at pleasure." When Mr. Fish has a week to spare, he ought to look round London, and see where the best succulents are to be had, and, between us, we could make up a fine selection for amateurs who cannot grow any other kind of plants. We could pick up a dozen sorts that would answer for balconies, terraces, and terrace-gardens, better than the more fashionable plants now in use, because of the novelty of the thing, and the little care needed to look after them. Perhaps Mr. Appleby—now that he has a shop of his own—would hunt out for us the best of the pau Aloes, tree Aloes, and other suitable ones from the other sections.

I shall close this section with a wonder—a real tree-pink—*Dianthus fruticosus*. I never saw it, or the like of it before: it has a stem as rough and rugged, and as woody as any plant in the garden, and if the shoots and leaves were cut off, no one could make out the trunk from that of an elm tree dwarfed by a Chinaman. Even as it was, had it not been in flower, I could hardly bring myself to believe that it was a pink at all! D. BEATON.

(To be continued.)

TRIFLES TO BE THOUGHT ABOUT WITH REGARD TO PLANTS IN PITS, &c.

It is quite possible to have too much of a good thing. The lady, so admirably portrayed in a late number, found this to be the case in regard to the abundance of fruit her garden yielded. Overflowing beneficence was no blessing to her! Many, who nobly buffet with the storms of adversity, lose all balance and self-control when the gale of prosperity comes. Nothing but real evils would ever cure the Mrs. St. Clairs of society of their imaginary woes. Necessity is the chief spur to energy and existence. Without it, there may be strivings and splendid realizations among the few, but there would be sloth and sluggishness, mentally and physically, among the many. What holds true of matters in general, holds equally true in gardening. Fine weather is not unfrequently permitted to do more mischief than the storm. A dull, mild autumn and winter will leave more empty pots behind them than an unusual amount

of frost and snow. In the one case, we are lulled into carelessness; in the other, we are aroused into action.

Already complaints are reaching us about having "too much of the good" of a warm, dull, dripping autumn. Cuttings fairly struck, and secured in pits and frames, are already damping off; and where will they be when April arrives? One person has acted so much on the defensive, that the glasses were kept close, to keep out the dull, foggy, moist air; and when he expected to be able to congratulate himself on his wisdom, the moving of a sash showed Mr. Damp in quiet undisturbed possession. A second has kept them exposed night and day, though many have been rotted off by the surface of the pot; and the soil, in addition to losing its nourishing properties, has been lashed as hard as a brick. A third, knowing that growing plants must not be thoroughly dry even in this weather, has wisely told young blue apron to examine all: to take out those that are dry, and water and replace again when drafted; and, on his future inspection, he has the pleasure to perceive that the bottom of his pit, so dry erstwhile, is now as thoroughly soured as if a canal from the Nile had been introduced for irrigation. And here, fourthly, is our friend, *Present Time*, chuckling with glee over what he calls, "the stunted rusted things of neighbour *Look-before-him*," who beat him, it is true, last season, but let him look out for the next! "Why, his plants have not budged since October; while mine, from the attention and heat I have given them, have grown several inches, and the leaves are as green as leeks." Hint that there may be such a thing as extension, without much addition, and you will be met with a stare, that is designed to tell you, that surely, if great men have found out that *plants are increased greatly in bulk when the leaves are gone*, he cannot be wrong in coming to a similar conclusion when his leaves get fresher every day, and a measuring rule tells him how his shoots lengthen by inches. *These*, and many more cases, I will endeavour to meet in a few directions.

1st. *At all times, but especially in winter, let all stimulants to growth be in proportion to the presence or absence of light.*—It is somewhere about eighteen years since I sent an article to "London's Magazine," disapproving of a high temperature in hothouses at night. Opinions held then have been more than confirmed since—though then I had plenty of reasons, theoretical and practical. The mentioning of these in detail would occupy a number. Let me glance at one or two. In circumstances, as respects heat and moisture favourable to growth, I kept an account of measurements, taken several times a-day, of quick-growing plants. I found that when the night temperature was at all high, increase in length chiefly took place during the darkness of night. The next greatest growth, as respects length of shoot, took place in dull, shady days. In bright days there was always a difference, as respects mere progression, in the case of one plant kept shaded and another fully exposed to sunlight. I perceived, however, that the plant with most light soonest arrived at maturity, bloomed best, and was less subject to casualties. I also found that in the case of such plants grown fully exposed to light, and with as low a temperature at night as to be safe; and, again, of those with a rather high temperature at night, or somewhat shaded during the day—when equal weights of similar-looking shoots were taken from plants thus differently treated, and exposed, first, to the evaporating influence of a dry, heated air; secondly, to being burned in an open vessel; and, thirdly, charged in a somewhat close one—that in every case the hardy light-treated plants produced the heaviest weight of residuum. Then I came to the conclusion, that there might be mere elongation and expansion without much addition, on the same principle that out of a small piece of brass the clever worker will manage

to spin out many yards of wire. Exceptions there are, arising from the peculiar nature of particular plants; but, as a general rule, our young friends will do well to bear in mind, that the shining of the sun on the leaves is necessary to solid additions.

What care, then, is necessary now for plants in frames and pits, after such a season of warm, dull, muggy weather. Do what could be done, there was too much of the wire-drawing as respects growth. Every thing should have been done, and must continue to be done, to prevent mere elongation, by keeping the plants as dry and in as low a temperature as to be safe. In general cases, where has been enough of moisture in the air to supply plants in such places without watering the roots; and if, during a week's gloom, an hour's sunshine should flag the foliage, it would be advisably then to dew the foliage with a little water, instead of drenching the roots. The very flagging, in such circumstances, speaks of an enervated state of growth; and frequently, when the sun breaks out on a sudden, plants, rendered tender and watery by dull weather, will be most benefited by a slight shading, removing it, however, as soon as it can be done without. On dry days the sashes should be wholly off, when the outside temperature is 40° and above. No rain, however, should fall on the plants, as the moisture, when close, would increase the elongation. In misty weather keep the sashes on, but let air permeate freely beneath them, back and front; taking it away only at night, when there is danger from frost.

2. *Prevent damp from attacking and spreading.* No better weather could have been chosen for the attacks of this insidious enemy. Wherever the plants, in addition, have been kept close and warm, the slender shoots present another favourable circumstance. A low temperature, and abundance of air, as detailed above, are the chief preventives. But even these will not be sufficient. A few decaying and damping leaves left alone will soon spread their contagion. Cleanliness must, therefore, be duly attended to. Not a decaying leaf should stand a day. All the fungous damps delight in garbage. Then the moving of the plants will be a great advantage. You can then roughly rub the outside of your pots; place fresh dry ashes, saw-dust, or boards, for your plants to stand on. Remove a little of the old surface-soil, and fresh dress with dry sandy soil well mixed with powdered charcoal. In delicate cases, a little of this powdered charcoal, mixed with dry sand, and a little, *very little*, powdered lime, and sulphur, may be scattered or puffed among the shoots and leaves. If the frame or pit is deep enough, a raised stage will be a great advantage, more especially if there are means for letting in air, front and back, *beneath* the stage, as well as *over* it by tilting the sashes. In extreme cases, lumps of unslacked quicklime will help to dry and purify the atmosphere. In foggy weather, and there is no artificial means of heating, a few bottles of hot-water, corked, will tend to set the air in motion.

Are all plants usually preserved in such places equally exposed to injury? No. The whole group of Geraniums will suffer little, unless unduly elongated by close heat, and dull weather. Verbenas, Anagallis, Petunias, Senecios, and all of that soft tribe, are easily ruined, and hard-wooded plants are easily mildewed. All the Calceolaria group will suffer little from damp. Half of young beginners ruin *them* by kindness, and a dry atmosphere. If nicely rooted, or commencing to root, they want nothing more during the winter, than to be kept from frost, have plenty of air, and a dusting from the syringe in fine sunny weather.

Suppose we want these plants chiefly for baskets and balconies next season, should we pot them singly in autumn in small pots, put several in a larger pot, or allow the young plants to remain in the cutting-pots? Any way, according to your conveniences, the size you

wish your plants to be, and the state of forwardness in which the cuttings are. Plants in small pots are liable to all extremes, and involve additional labour in routine attention, and any moving they require. When left in cutting-pots, the young plants should be chiefly round the outside, and thus the surface soil can easily be stirred and renovated. When struck moderately early, I prefer placing a number in largish pots, as they are less liable to extremes, and more quickly moved. But for all such stock purposes in winter I approve of wooden boxes—say from two to three feet in length, from nine to twelve inches in width, and from four to seven inches in depth. Any spare boards may soon be converted roughly into such a purpose, and if they have a good painting with quicklime, and be allowed to dry before using them, damps and funguses will trouble them little that season. The chief advantages are—that from the non-conducting properties of the wood, the plants are not exposed to the extremes of heat and cold, dryness and moisture, which they are liable to in small pots, and thus necessary attentions are minimised, while all labour in moving from place to place is abridged—a matter of no little consequence where a limited portion of glass is made subservient to many purposes during the season. When economy in labour becomes a still more serious affair, I shall expect to see, for all outdoor ornamenting purposes, with tender plants, pots, and boxes, too, entirely dispensed with, and the requisite number of small plants pricked-out into beds in autumn, there to remain until wanted in the following May.

3rdly. *Watering*.—This has been already alluded to. So few will require anything of the sort, that they had better be removed, watered, and replaced when the extra moisture has drained away.

4thly. *Protecting from frost*.—We have had a few touches of this, and must expect more. Plants in general are in the worst position for resisting its effects. Even under the hardest treatment, the last six weeks has filled them with crude juices, along with a deficiency of solid matter. It is good, therefore, to be prepared. Those who have acted according to the advices of this week would have the plants near the glass. Unless these were on a stage, so as to have several feet of air beneath them, the nearness to the glass, though beneficial in fine weather, would be equally prejudicial in a sudden frost. When there is the smallest likelihood of the *icy king*, it is best to cover the glass at night, even though it would be advisable to leave half-an-inch of air behind. In such circumstances, several degrees of frost would not do much injury, as radiation would chiefly proceed from the glass, or its covering. But near the glass, and not covered, tender, spongy shoots would suffer much from a few degrees of frost. I have hitherto made as simple as I could the whole theory of protection. I could add nothing were I ever so willing. I was told by a person lately, who had read these remarks, that he had built a six-light pit, sunk it two feet in the ground, and left two rows of out-jutting bricks on the back and front wall, so that he could place plants in the bottom, or on transverse platforms of boards, near to, or nearer the glass; and that he meant to have a regular tarpaulin to keep all his glass dry at night in winter, with a softer cloth to lie upon the glass, and to have hay, &c., on it, and beneath the tarpaulin in rough frosty weather. And how could I do other than approve. He rates me, however, that his plants are *damping*, even though he has *lung linings* round the walls; and that the water stands in the bottom of his pit like a canal. Reader! have you any desire to have such a pit; and, for the sake of neatness and great ultimate economy, do not grudge a little primary outlay? Then build as our friend has done; only have hollow walls if possible, and then they will need no protection; and if not, tie

on them neatly for the winter months, a two-inch layer of wheat-straw. Concrete the bottom of your pit to prevent damp rising; for you have no business to put water there now, and a little in summer will be rather an advantage. Raise the earth round the outside of the walls of your pit, so that when bent or rolled firmly there will be a slope outwards of at least one inch to the foot; cover this to the width of six feet with one-eighth-of-an-inch in thickness of coal tar; over that place a layer of gravel firmly rolled, and you may defy outside moisture finding its way within; and then, for protection, tack a lath to the side of every sash—to be removed in summer—and have light half-inch deal wooden shutters, well painted, made to slide up on every sash; and though for such covers for six ordinary lights you pay the best part of two pounds, with ordinary care they will be little the worse for twenty years' wear, while they will enable you to dispense with all other protecting material, except a little litter thrown over them in *very severe* weather. The laths round the sash are both to prevent the covers wearing off the paint, and to enclose a body of air between the glass and the cover. Who, that prides himself on being an amateur, would not prefer examining his pets in cleanliness and comfort, instead of wading among rotting filth and litlefy, dripping mats?

The same principles will apply to pits and houses heated and used as *Preservatories*. The labour and attention is, however, considerably abridged, as in the dullest, closest weather a sharp fire in the morning, with plenty of air, will promote a free circulation, and thus so far put a damper on damps. Keep in view, however, our first directions. R. FISH.

CONSERVATIVE AND HEATED FRUIT WALLS.

A CORRESPONDENT (F. H.) writes thus:—"Observing in THE COTTAGE GARDENER that Mr. Appleby remarks upon the Osmaston Manor Garden, and mentions that the garden-walls there are heated with hot water, and answer well, I should feel obliged to him if he would answer the following queries:—

"How large is the boiler? What length of pipe to one boiler? What is the diameter of the pipes? What height is the wall? And are there any gratings in the wall?" Our Editor very naturally sent me these queries to answer; and in order to be quite correct, I sent them to my friend Mr. Lamb, the gardener at Osmaston, and with his usual prompt kindness I had, by return of post, the following answer:—

1st. "The boiler is composed of a series of pipes three inches diameter, connected together at each end; thus forming a boiler seven feet long, which is placed over the fire. 2nd. We have upwards of 3000 feet of pipes to one boiler, but intend to connect another powerful boiler, to be used if found necessary, as there is more pipe to be added. 3rd. The pipes are principally four inches diameter, except the flow and return near the boiler: there they are five inches diameter, in consequence of there being many connections. 5th. There are no gratings in the wall. The walls are about twelve feet high." Mr. L. adds in a postscript, that if any further description is necessary he will be happy to give it. So I would advise F. H. to write to him personally. This correspondence is just the thing that is really useful to such parties as may be about to build garden-walls, either for fruit, like those of our correspondent and the Osmaston gardens, or for growing ornamental plants against, usually called conservative-walls, though, I think, *preservative* would be a better term.

Heated walls have, as is well known, been used for a long period. I well remember, when I was under gardener at a place in Yorkshire (Wheatley Hall, near

Doncaster), what a toil and turmoil the attending the fires was to a young man. The head-gardener would come round with his lantern some cold night in March or April, feel at the wall, and if it was too hot or too cold, would he not storm away at my carelessness! I was young then (it was my first place), not more than seventeen, and could not understand the consequence of too much heat or too much cold to such, as I considered, hardy things as Peaches and Apricots. He was a gardener of the old school, and grow some as fine Peaches as a Snow, or a Collinson, or any other good gardener of the present day. He was a strict disciplinarian, and I never forgot his lessons. His name was Mr. B. Mann, and is worthy of being recorded, for he was a worthy man, and filled the situation for more than thirty years with credit. The walls, I need not say, were then nothing but smoke flues, winding upwards in length of about fifty feet to each fire; so that it was no trivial affair to attend to ten or a dozen fires during the season. Science has done much to ease the labour of the under-gardener. Hot water has not only lessened the extreme labour, but has rendered the necessary attention more certain in its results. One fire, as in the case of the hot walls at Osmaston Manor, is more easily attended to, and the heat is far more equally diffused throughout the entire length of the walls, to say nothing of the great saving in fuel. In my younger days, the idea of devoting a wall to the growth of half-hardy plants would have been thought a most extravagant idea, something like a steam railroad; but now! no garden of any celebrity but must have its conservative-wall. Perhaps, the finest example in Great Britain is the one at Chatsworth. I have observed the progress of that wall with great interest. When the idea of growing half-hardy plants against a wall was first acted upon by Sir Joseph Paxton, perhaps nothing more was aimed at than a trial of the cold which certain plants would bear if sheltered by a wall in about the same degree as gardeners shelter the more tender fruits; and the success of the first attempt led to the present splendid example. The wall now extends to the length of several hundred feet, is covered with glass, which extends a sufficient distance to allow walking under it. The plants thrive beautifully and flower magnificently. There may be seen *Oranges* and *Camellias* in the greatest possible luxuriance, the former blooming and fruiting freely, and the latter flowering profusely; also great numbers of New Holland plants, such as *Acacia*, *Eucalyptus*, *Hebe*, &c., growing so well, and blooming so gaudily as almost to be unrecognisable. I had the pleasure of seeing this famous wall this last August, and a more interesting and beautiful sight in gardening I scarcely ever witnessed. One plant, the *Ribes speciosum*, was particularly gorgeous. This plant is undesignedly neglected, very few gardens possess it at all; yet there are not many plants that are grown against a warm wall that surpass it in beauty when in bloom.

There is, also, a tolerably good wall of this description which was planned and planted by the same able garden architect (Sir J. Paxton), at Tatton Park, near Knutsford, in Cheshire, one of the finest seats in that fine county. It belongs to W. Egerton, Esq. Another wall of this description was mentioned incidentally by my good friend Mr. Fish. He saw it at West Park, and promised to describe it. I trust he will not forget, as the subject of conservative-walls, I assure him, is becoming one of the forward moves in gardening. I saw, on my late journey, many instances on a small scale indeed; but still the idea, and desire to carry out the idea, is progressing; so that any information any of us can give on the subject will be acceptable. I shall try to do my share, and propose to myself to ask and try to answer the following questions. What is the use of a conservative-wall? What is the best aspect? How

should it be built or formed? Should it be heated? Should it be covered with glass? And lastly, What kind of plants should be planted against it? and then give a list of such plants as would be suitable for the purpose.

T. APFLEY.

(To be continued.)

THE PANSEY.

AMONGST the various tribes of florists' flowers, there are few that attract more admiration than the *Pansy*. It possesses many points of beauty, both in form, colour, and length of blooming season. We find it at all the spring and summer exhibitions, both as cut blooms, and flowering in pots. It is a favourite throughout the length and breadth of the land, and is cultivated largely by almost every florist. As one proof of its general cultivation, I have received a list of kinds or varieties grown by a gentleman so far north as Berwick-upon-Tweed.

The readers of THE COTTAGE GARDENER, AND GENTLEMAN'S COMPANION (and a very good companion, too, in his garden), will recollect that I invited florists to send me a list of such varieties as they considered first-rate in quality. My Berwick friend was the first to respond to the call, and, in consequence, I send a copy of the list to the Editor. I have no doubt it will be received gladly by our readers, and will be useful to many amateurs, and even dealers. I can vouch for the accuracy of the list, and for the qualities the writer describes.

WHITE OR STRAW-COLOURED GROUNDS, WITH MARGINS OF BLUE, LILAC, PURPLE, PUCE, &c.

Almonzor (C. McLaurin); white and purple; a good old flower.

British Queen (Dickson and Co., Edinburgh); white, and fine bluish-purple; beautiful eye; new.

Boudicca; white, upper petals dark purple, belt same colour; very distinctly marked; new and fine.

Countess of Roslin (Downie and Laird); beautiful; straw and rich purple belting; new, and extra fine form.

Duchess of Rutland (Thomson); white, with lilac belt on the top petals; fine.

France Cycle (Grieve); white, and rich deep purple; fine form.

Faith Mackenzie (Stirling); upper and lower petals dark blue, centre very pure white.

Lord Hardinge (Gossett); straw, and bright puce.

Lord Jeffrey (Lighbody); white, deep purple belt, and top petals the same colour; good velvety substance.

Hunt's Helen (Hunt); white and light purple; a fine flower, but sometimes comes indistinct in hot weather.

Mrs. Beek; white centre, rich purple belting; fine eye; extra fine form.

Miriam (Dickson and Co.); white, broad belt, and top petals of the richest dark purple; good substance; fine form; eye large and very dense; new, and extra fine.

Miss Talbot (Dickson and Co.); white, belt and top petals deep purple; new and fine.

Minstrel (Dickson and Co.); white, belt and top petals blue-purple; new and fine.

Royal Standard (Dickson and Co.); white, belt and top petals of a beautiful light purple; new, and extra fine.

Royal Visit (Dickson and Co.); light primrose, and rich deep moreen top petals and belt; good.

YELLOW GROUNDS, WITH MARGINS OF BLUE, LILAC, PURPLE, MAROON, &c.

Captain Agn (Major); yellow, belted with rich, dark maroon; fine.

Commander-in-Chief (Youell); yellow-bronze, purple margin.

Constance (Thomson); yellow and purple; very constant.

Duke of Norfolk; yellow, and deep maroon; apt to run in summer, but a noble blower when in perfection.

Elegant (Thomson); yellow, and deep bronzy-purple; fine.

Gliff (Dickson and Co.); yellow, top petals and belt fine bronze; large size (has been three inches across); good substance; new and extra fine.

Jubilee (Dickson and Co.); yellow, fine bronze-pace belt and top petals; form and texture very fine; new.

Lady Emily (Sheare's); yellow and bright, clarot; large and constant; new.

Mr. Beck (Turner); yellow and maroon; good old variety.

Post Captain (Maishment); yellow and bronzy-purple.

Sunbeam (Dickson and Co.); rich, deep, orange-chrome margin, and top petals bright bronze-crimson; blotch large and dense; constant and beautiful.

SETEPS.

Adela (Turner's); golden-yellow; large and fine.

Blanche (Turner's); large, white, fine, bold eye.

Duke of Perth (Handyside); very dark; fine and large.

D'Israeli (Hunt); very deep purple, with a shade of blue.

Flower of the Day (Downie and Laird); rich dark plum; bright golden eye, with a fine, white crown; round and good; new.

Lutey Neat (Scotcher's); dark purple; fine.

Magnificent (Neilson); shaded puce.

Satirist (Thomson); bronze; quite a distinct flower.

St. Andrew (Downie and Laird); rich, dark mulberry; of perfect form; new; and a first-rate show flower.

Sovereign (Dickson and Co.); a golden-yellow self; blotch large and dense; new; large and fine form; one of the very best yellows.

Tranquill (Dickson and Co.); yellow; large and fine.

My correspondent says, "I consider, the above the very best Pansies grown in this neighbourhood; the greater part I have myself, and therefore can speak from experience; the remainder I have had opportunity of seeing in flower, so they may be depended upon as being first class. I do not hesitate to say, that a well-grown bloom of any of them would be an acquisition to any stand."

Such lists as the above, from distant parts of the kingdom, are exceedingly interesting. Many of the varieties, I think, would be desirable to the florists of the south; and the florists of the north will be pleased with a list of the best flowers grown in the south. This list it shall be my business to furnish in my next paper; the space allotted to me now being full.—T. APPLEBY.

(To be continued.)

COAL ASHES AS A PRESERVATIVE TO CELERY, &c.

THE dark days before Christmas being proverbial for their decaying influences, means must be taken to counteract their destructive tendency. It usually happens that the protracted dull and damp weather has the effect of injuring all herbaceous growth, in which the vital powers are not in full and vigorous action: for instance, celery that is full grown begins sooner to decay than the younger or later-planted section—the former having attained a degree of ripeness, which, like maturity in all other cases, is sooner or later followed by decay. To maintain the one and arrest the other is an important duty of the horticulturist. The enthusiastic florist acts in accordance with this principle when he shades his beds of tulips, or other perennials—he thereby retards nature's operations in the various functions necessary to the

production of seeds, as well as the ripening of the bulb, or other portion of the plant. The shutting out of sunshine is the means of his retaining in perfection that part of a plant's formation to which he has attached the name "beautiful." Now, though the principle is the same, wherein a plant is preserved entire against decay arising from another source, yet the means to be adopted are so different, that it is only in a literal sense that they agree. The tendency of summer sunshine being to hasten plants on, to accomplish that purpose destined them by nature (namely, to ripen and perfect their seeds, in order to perpetuate their species), is another thing from the hardship of winter acting on a plant of mature growth rendered delicate by artificial cultivation, by which term Celery and Endive may justly be known when they have undergone the process of blanching, which process, by-the-by, is accomplished at the expense of the plants' constitutional hardihood; and though they may occasionally live and prosper after undergoing this debilitating operation, yet, in many cases, they die before the return of that stimulating season which recalls their dormant energies to activity again. That a great number should perish under the ordeal they have been subjected to, need not be surprising, when we consider that the process is all but total destruction at once to the plant. This may appear strange, but it is true; it is only those parts of the plant left to enjoy the action of the atmosphere that keep the others alive: to totally cover all would be a more speedy death than the protracted one, wherein we make the plant part with some of its juices, which we reject as unpalatable; and having done so, we need not be surprised at the loss of health which the plant has sustained in the trial. Productions less robust would have perished under it, but Celery resists decay more than most things, though its endurance has limits; and the earliest "full blanched" of the season will be the first to decay, while the later grown will keep better, and do to succeed it. But then the question is, how is the season of the first named to be prolonged? how is its decay to be arrested? The question is an important one, but its solution lies in a nutshell. Celery, as well as everything else, is preserved a longer or shorter time in exact accordance with the medium by which it is surrounded; should the medium consist of putrid matter, wet and sour, its contagious qualities may easily be guessed at; if, on the other hand, a good, dry, anti-decaying material be used, a contrary result will be the consequence. Now, I do not use the word dry in the sense it is accepted as a fireside term, because it is folly to think of anything keeping dry that is in contact with the ground, should there even be a waterproof covering over it, loaded as the ground is, as well as the atmosphere, with moisture at this season. It is, therefore, useless to suppose that the term "dry" has any further meaning than as a substance absorbing less water than most other things by which it is surrounded. Ground of a certain description is called "dry," although exposed to every shower that falls. The fact is that by conventional usage we have accustomed ourselves to call it so, because this same rain is, by the component parts of such ground being so open, so speedily carried off, that it is, comparatively speaking, drier than soil of a contrary kind; consequently, we will take it for granted that this porous sandy soil is better adapted to blanch and preserve Celery than the deep loamy kind, strongly impregnated, as it often is, with humous, and other putrid or absorbing matter; but then, many gardens consist entirely of this latter description, which though not the best for blanching this vegetable, is certainly the most suitable for growing it.

Now, it is no difficult matter to grow Celery in one substance and blanch it in another, and many have been the means used to comply with this latter suggestion.

Earthenware tiles or pipes, whole and in halves, have been recommended, and used with more or less success: straw and other bandages have also been tried by some, but the result here has not been satisfactory, affording as it does such an harbour for slugs and similar enemies, it has another bad property also, that of beginning to rot just at the precise time when it ought to preserve itself unimpaired; and by its decaying when the plant is less able to resist its contagious influence, the evil produced is badly compensated by its former utility. Straw, moss, and other litter, is, therefore, to be avoided, and something else substituted. I have myself, after many trials, found nothing so useful as plain coal-ashes; their porosity is such as allows but a small quantity of water to loiter amongst them, compared with other things, while they have a sort of anti-decaying influence in their having so recently passed through the fire, and the way I use them is this—when the celery requires earthing-up, a quantity of ashes is thrown against it by a person on each side of the row or trench, whilst a third one holds the leaves of the plant together; the ashes are then backed-up with earth, and the process repeated when necessary; by this means, no more ashes are used than requisite to enclose the stalk a few inches on all sides with this keeping substance, observing that it is essential that the ashes last of all should be at the summit:—beating the sides of the embankment so as to throw off the wet, is also advisable; but except in very severe, hard frosts, I do not recommend the use of straw, or any other loose covering at top:—it would, doubtless, be better, if the plants could be entirely protected from rain; but since that cannot be, I have little faith in loose straw, or other litter, doing much good that way. Certainly it will exclude frost, and for that purpose it is valuable; but remove it in rainy weather, or the covering up of that part of the plant which has maintained vitality in the wet, will be its utter destruction sooner than it would otherwise be. Another property that coal-ashes have, is the repulsive medium they present to worms and other depredators that prey on the celery when it becomes fit for use; the sharp, gritty feel that it has, together, no doubt, with some obnoxious quality imparted to it in its combustion, makes coal-ashes but little desired by the tribe of enemies the Celery suffers from. These qualifications, united together with their cheapness, and, not the least, their utility in stiff, heavy lands afterwards, enable me to recommend them to the amateur with more confidence than anything else in that way that I have tried.

J. ROBSON.

DAHLIAS OF 1851.

My remarks on the new Dahlia seem to have given pleasure to some of your readers. I proceed, therefore, to fulfil my promise respecting the Dahlias which came under my notice last season. I shall begin alphabetically, so as not to appear invidious, though I dare say I shall offend some of the vendors. If I do, the only revenge I recommend to them, is more care in sending out, and I believe many of them really are desirous of doing right. Let me begin with noticing another fact I have proved, which is, that, owing to so many plants being propagated from the roots, and that after being sent out by the advertising party, the plants have again to undergo decapitation: and after losing the side-shoot, so as to make three plants out of one, the poor amateur gets a chance of blooming his half-guinea plant about the 20th of September! To avoid all this, let every amateur send to a respectable grower in April, with orders to have his plants the first week in May, or not at all. That is my plan.

Another important matter, is to know how to grow your plant when you have it. I will give you my experience. Repot your plant as soon as you receive it, and keep it growing, not in much heat, but with plenty of air. A nearly-

spent dung frame, giving only a little bottom-heat, is best, just to swell the plant, and not let it spindle up. Plant out, the 1st of June, six feet apart. Never cut off any branches, but tie out the shoots; and if they are many, remove them when very young, but never cut off branches. I saw some plants this year which appeared like stalks of cabbages, with a few blooms on the top. My plan is to top the young plant, and then the shoots will bloom well by being thinned out, and the centre bloom is generally semi-double. My plants, this year, almost met together, and none above four feet in height, except *John Edward* and *Fearless*, which are very tall growers. This I consider was derived from watering every night over-head, not round the root. Just try this, and see the effects.

I begin my remarks with

ALICE (Drummond's); fine colour; in almost every case semi-double, and did not have a good bloom all the season.—*Discarded.*

ALERT (Barnes'); long petal; very thin; dull colour; good eye.—*Discarded.*

ARIEL (Turner's); white; not one good bloom all the season; good colour.—*Discarded.*

AURORA (Keyne's); dull colour; sometimes very fine; hard eye; requires much water. I think I shall try it again.

ANNIE SALTER (Salter's); peach, like wax; one of the best flowers I ever saw; requires no cutting out; very free bloomer, and every bloom on the plant I grew fit for show; first-class show flower; rather late; and a good large plant. Should be put out.

ABSALOM (Spary's); amber; pretty colour; rather thin; and late in the season. I had a bloom or two pretty good; shall try it again.

CLOTH OF GOLD (Hooper's); dull colour; very bad.—*Discarded.*

COMPACTA (Gaines'); buff-scarlet; very small; dull colour.—*Discarded.*

DR. FRAMPTON (Rawlings'); very pretty, and fine form. I never had a bloom large enough to show, but I had some very perfect flowers. It must be very much thinned. Shall grow it again, and try hard to get it large enough. Smallness is its only fault.

DUCHESS OF SUTHERLAND (Turner's); fancy purple and white; too thin and uncertain.—*Discarded.*

DOUGLAS FERROLD (Keyne's); this I have seen very fine. I fear it is uncertain; but when caught, it is quite a gem. Owing to its tip, the form is not good and not bearable, except when it has the tip. I shall try it again. Colour buff, with scarlet tip. I remember seeing some blooms good at Surrey Gardens. Cut out the plants by thinning.

EDMUND POSTER (Turner's); crimson; very full; coarse. I do not like it. Flower round, but not symmetrical.—*Discarded.*

EVENING STAR (Salter's); good colour; thin; poor.—*Discarded.*

FLORA McIVOR (Keyne's); purple, tipped with white. This flower was a gift, and proved a good one. It is very fine, and first-class; fancy flower; not cut out; grows strong.

GLORIE DE KATIE; lilac, black and white striped; a very beautiful flower; good form, and first-class; very certain; grows well.

GLOBE (Turner's); bronzy-brown; new colour; good form; uncertain, but sometimes good. I shall grow it again. Requires cutting out, and good growth.

GRAIN D'OR; orange; dull colour; not symmetrical.—*Discarded.*

GEORGE VILLIERS (Union); rather thin; good smooth petal. I shall try it again. My plant was very poor, and had no chance of seeing it until late.

JAUN DE PASSY; pale yellow; beautiful colour; very full, but not quite right at the finish; a good flower for the garden, but not for show.—*Discarded.*

JOHN DAVIES (Cook's); not so good as *Cobden*; too rough, and not shaded.—*Discarded.*

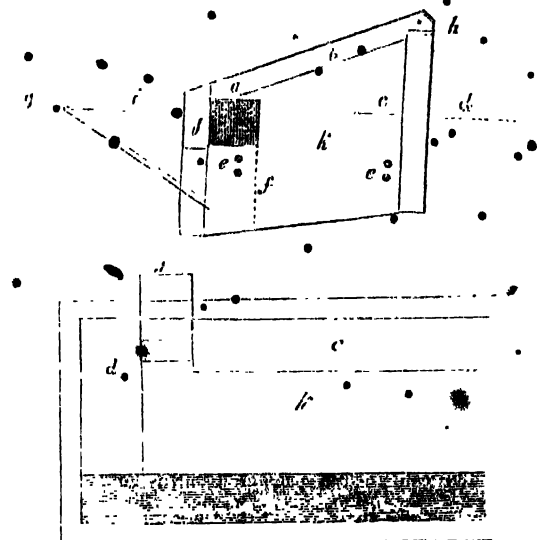
KOSRUTH (Drummond's); fancy; not good enough.—*Discarded.*

LOUISA GLENNY (Rawlings'); yellow; one of the finest for form and colour. I grew two plants, one of which gave me all show flowers, the other not one. Requires cutting out. Shall try it again, for, when right, I have seen no yellow equal to it for form.

LAURA LAVINGTON (Keyne's); fawn, tipped with white; very fine-formed flower, but came many selfs, and not tipped. Perhaps the season was against it; at all events, it must be grown; we have few such good forms among the fancies yet. LALLIBUT (Barnes'); red, tipped with white; very fine, saucy flower; requires cutting out; was very late with me, but first rate when grown well.—OBSERVER.

(To be continued.)

CUCUMBER PIT.



a, the soil; b, trellis; c, stage for ferns; d, stage for ferns, with water-tank under; e, hot-water pipes; f, brick pillars, to support the slate box; g, pipe for admitting fresh air; h, pipe for the escape of foul air; i, ground-level; j, steps by which you enter the pit; k, passage; l, the wall is built hollow here.

THE above is a plan of our Cucumber pit, which we have now had at work for fifteen months; and as it answers the purpose so well, I thought it worth a corner in THE COTTAGE GARDENER. The pit is forty feet long, four lights of which are devoted to Cucumbers, and the other six for Kidney Beans, both of which I send to table all the year. The soil which I use for Cucumbers, is one part of loam, dug from the pasture, not more than three inches deep; one part leaf mould, and one part old hotbed dung, to which is added a small portion of soot, mixing these well together. When sufficiently dry, it is put into the pit, first draining with bonese over which I put the roughest of the compost. In a day or two the soil is warm enough to receive the plants, which have previously formed three or four rough leaves. I always plant them two inches deeper than they were before, and fill in round the stem with charcoal, as that prevents canker. I find it best to have only one plant to a light, as the Cucumber thrives best with plenty of room. The leading shoot I train up the centre of the light; never stop it till it reaches within six inches from the top of the light, but the laterals which are sent out are stopped at the second joint, and trained out at right angles, exactly the same as a vine managed on the spur system. They very soon break from the second joint, at which time, and always afterwards, they are never let go more than one joint at a time, taking care in stopping not to injure the fruit, which is as yet almost imperceptible. All the male blossoms I take off, as they are of no use, except seed is required, and I never allow any fruit to be produced till the leader has reached the top. I always use water at the same temperature as the soil, which is 75° to 80°; and when I water, I give a thorough soaking, but not again till it is really required, using liquid-manure every alternate time—poultry dung is the best for that purpose, taking care not to make it too strong. The air pipes g and h are always open day and night, except in very sharp weather, when h is closed. I ought to mention that there is one of these pipes under each light. Of course, in very hot weather, the lights are

tilted up at the back; but it is better, in the winter months, to allow the temperature to rise a few degrees than to open them too much for a "blink o' sun," that, in all probability, would make the plants flag, which is sadly against their well-being. The night temperature I prefer is 60°, and in the day 70°, and 80° if from sun heat, with plenty of moisture often charged with sulphur, as that keeps mildew at arms-length. If this meets your approval, I will trouble you very soon again with a plan of a flower-garden, and also an American ground, accompanied with a few suggestions.—J. Rust, Gardener, Chase-Side-House, Enfield.

WINCHESTER AND SOUTHERN COUNTIES' SOCIETY'S EXHIBITION OF POULTRY.

CLOSELY following on Dorchester and Hitchin, Winchester has now added another name to the list of those towns and districts which have this year initiated themselves in the establishment of societies for the improvement of the various breeds of domestic poultry. This exhibition, for which active preparations had been some time in progress, took place on Wednesday, December the 1st; and, whatever the previous anxiety of those who had been most interested in the success of the undertaking, the subsequent comments of all whom it brought together are sufficient evidence that they did not overrate the interest and attention that it was likely to awaken in the district assigned to its operations. It was, indeed, natural that many would doubt the probability of such general support as more sanguine individuals ventured to anticipate, but it cannot be otherwise than satisfactory to feel that such doubts have been thus overcome, and that some of those who thought least favourably of the project have given the most decided marks of approbation at a triumph so little expected. Everything, indeed, concurred to stamp success on this first meeting of the Winchester and Southern Counties' Poultry Show; the continuous rain of the last six weeks had at length ceased, and a bright sunny day both favoured the travels of the feathered competitors, and aided the necessary preparations for their reception, which took place on Tuesday, and on the evening of that day all were ready for the inspection of the next morning.

The Rotunda of the Market-House, and two large rooms, contained 172 pens, on which we purpose to make some few remarks, in the order they occupied in the Catalogue and the Judge's Award. The latter individual appears to have thought but lightly of Hampshire Bantams as there represented, for although a first prize was awarded to the Gold-laced birds, that was assigned to the pen belonging to Capt. Hornby, R.N., of Knowsley, in Lancashire, and certainly, in colour, figure, and condition, we yield a ready assent to the verdict. A second prize was assigned to this class; and the Partridge Bantams of Mr. Sayers were deservedly admired. The Silver-laced and White Bantams were but indifferent, and the Black ones had no representatives. It may not be amiss to remind our readers, that however desirable size and an upright comb may be in a Shanghai, they are all equally so in the present instance.

Near neighbours were the tiny winners in this class to Mr. Sturgeon's magnificent pen of Shanghaes, which bore off no less than three different prizes, viz., that for the best cock and two hens, with the separate awards for the best single cock, and the same for one of the hens. Weight, colour, condition, and figure, were here displayed in full perfection, and were there room to add another laurel to their owner's wreath, every voice would have at once accorded it; they were pre-eminent, and fortunate would it have been for the Judge if no greater difficulties had come before him than could have arisen from any comparison of these with their competitors. Mr. Sayers' birds, and those belonging to Mr. Gilbert, were good specimens, and could have no discredit reflected on them by suffering defeat from such antagonists.

In Class 3, for a Cockerel and three Pullets of 1854, Mr. Sturgeon's name again appears with all the honours. This class contained twenty-seven entries, of which No. 41 belonged to Mr. Punchard, of Blunt's Hall, Haverhill, Suffolk; the Cockerel was a bird of remarkable beauty in point of

make and colour, the latter a rich buff, powdered, as it were, with orange, gold hackle, and singularly free from any dark feathering; the pullets were equally meritorious as regarded plumage, no less than distinctness of form.

Another year we shall, doubtless, have to chronicle a more even class than were exhibited on this present occasion; birds will then be better matched, and sent in higher condition; but while we venture on this anticipation, let us at the same time acknowledge sincere thanks to all those who were willing to send birds to give *relais* to this first exhibition, and to encounter criticism rather than run the hazard of empty pens.

In Class 6, a cock and two hens of Mr. Punchard's had a first prize; and, though alone in their class, it would assuredly have been very difficult to have seen adjoining pens equally well filled. While prevailing taste, as we admit, induces us to regard with longing eyes the lighter-coloured varieties, we frankly admit that the robust character, well-proportioned figure, and delicate markings of such birds as occupied pen 30, will always have great attractions in our eyes.

The class for Chickens of the Brown and Partridge was indifferent; and several points, both as to figure and colour, should have due consideration before another year again sees the Market-house similarly occupied. The possession of five toes will not enable them to perch more readily, or facilitate their movements on the ground. A good pair of white Shanghaes were shown, as single specimens, by Mr. Sayers; and a pen of Chickens of the race came from Mr. Chase, of Turwick. Many of the Shanghaes, competing as single fowls, were exhibited in the Rotunda; while the majority of this class occupied the large room on the left of the entrance; a position, during the whole day, so densely crowded, as clearly to indicate the greatest point of attraction. The single-combed Speckled Dorkings were present in great force and excellence. We concur, however, with the award that gave the first prize to Mr. James Lewry; in whose pen, colour, figure, and substance, were also admirably represented. Lady M. Macdonald had good birds exhibited in this class; and her Ladyship was also successful in Class 19, where rose-combed birds of the same race competed. Captain Hornby's Cockerels and Pullets in this class stood alone. Mrs. Mills' White Dorkings were shown in excellent condition; and, in shape and substance, left little to be desired; we could have wished, however, that the bill should have been quite free from any dark markings. Their competitors were without blame in this respect, but yielded the palm in respect of figure and condition, in which the winners were pre-eminently distinguished. (Same fowls occupied but two pens; of which No. 98 contained well-shaped birds; but we could not but regret the absence of other specimens of one of the most beautiful varieties of our domestic poultry.

Golden Hamburgs, both Pencilled and Spangled, were absent from the list. Another year we trust to see this omission supplied; for few members of the gallinaceous tribe will better reward our labours, where external appearance is mainly regarded. But brilliantly were the fortunes of the family retrieved by their first-cousins the Silvers, which, in both the Spangled and Pencilled varieties, were evidently anxious to atone for their relations' absence. Mrs. Mills' Pencilled and Mr. Chambers' Spangled birds were almost safe from criticism, if such an assertion can ever be safely made. The second prize for the Spangled birds was assigned to the pen that took the first prize at Lewes in the present year.

The Malays were but few in number, and, although good specimens were shown by Mr. Sayers, we cannot but hold it our opinion, that in all points they are at least equalled, if not exceeded, by their Oriental neighbours, the Shanghae.

Class 62 presented three very good pens of White Crested Polands—birds that deserved commendation no less for their general figure than for the great beauty of their tufts, which, especially in the winners, were perfectly globular and even. The prize for the best cock fell to the bird in the pen that took the second prize in Class 62. The extreme regularity of his crest, and points of excellence in figure generally, justly gave him precedence, although the fair sex were better represented in the younger birds.

Were it not that we hope to see all classes satisfactorily

represented when another year has passed over us, the Polish family should no longer occupy one pen; but since the Winchester, in common with all other Societies, seeks to improve, we may express our hope that the Golden and Silver-spangled Poland, whether ruffed or otherwise, will then come before us in a more favourable light than that in which we can now venture to regard them.

In Spanish, Captain Hornby met with his usual, but well deserved success; and many a claimant was at hand for the purchase of these much-coveted favourites.

Pigeons were few in number; but a pair of Capuchins and another of Carriers, belonging to Dr. Wesley, of Winchester, were justly distinguished. The Tumblers were few birds.

In Bucks, Lady M. Macdonald had a pen of East Indian (the Labrador is as entirely a misnomer for these birds, as the term Cochinchina is for Shanghaes). A first prize was awarded for this pen, there being no other competitors; but we should wish to see a fuller display of the golden-green metallic lustre on both ducks and drake.

The Aylesbury Ducks of Mr. Edwards, Captain Hornby, and Mr. Page, fully merited the Judge's award. Mr. Edwards' other pen of older birds were probably passed over on account of their stained bills, a change we were informed that was first perceived at their last moulting. Of Mr. Punchard's Rouen Ducks, our commendation must be strongly expressed—they were excellent in every respect.

We cannot think that Hampshire, or any of the southern counties were at all fitly represented by the Geese that came into competition on this occasion; and its farmers will do well to look to the Toulouse Goose, either pure or crossed with our own Breed, to give both size and quality.

Lady M. Macdonald was successful with her Turkeys, of which some bronze-tinted birds carried off the first prize; but this class also will admit of improvement.

No. 168 contained a pair of Guinea Fowls in good plumage.

This ends the Catalogue of the First Winchester Show; and if in its subsequent progress it retains its claim to that public support which has been so liberally, yet so justly awarded to its infancy, the expectations of those who first suggested its establishment will be fully realized, and amply rewarded.

The verdict of Birmingham Judges was at one time the sole authority to which English poultry-keepers had to direct their attention, but now, from Penzance to Yarmouth, and the most northern counties, an eagerness for information is being manifested in these matters, which can only be accounted for on the ground of such details being at length recognized as a profitable branch of farm economy. If poultry exhibitions should prove the means of directing general public attention to this branch of the farmer's revenue, while others are represented in so unsatisfactory a state, the object of their promoters will be fully attained. These Societies have directed their labours, in the first place, to what may prove profitable to the farmer and cottager; and, if in so doing, they can render service to any other class, by gratifying individual taste or inclinations, they will thus gain an additional motive for increased exertions. The multiplication of these Institutions will certainly have one beneficial effect, which we hope, indeed, is already recognized; we allude to the comparison which the exhibitions of adjoining districts must inevitably suggest, and the consequent more definite classifications of those principles on which awards are to be assigned. If the former fact may possibly instigate more minute inquiries into the reasons and authority for such decisions, and thus add to official responsibility, the latter will fully atone for such judicious hazards, by the gradual substitution of a more generally recognized standard of excellence and merit.

The Judge on the present occasion was the Rev. W. Wingfield; and we never knew decisions more generally approved. We will conclude with a List of the Prizes he awarded.

Class 1.—BANTAMS.

5. First Prize—Cock and two Hens, golden-laced, 54 months old, £12 12s. — Captain Hornby, R.N., Knowsley Cottage, Prescott, Lancashire.
9. Cock and two Hens (partridge), one year old, £3—A. C. Sayers, Esq., Claville House, Andover.
3. Second Prize—Cock and two Hens, gold-laced, three years old—H. Holloway, Esq., Marchwood.
13. Highly commended—Cock and two Hens, gold-laced, 18 months, £2—Mrs. Mills, Bistons, Ringwood, Hants.

Class 2.—COCHIN-CHINA (Cinnamon and Buff).

18. First Prize—Cock and two Hens—Thos. Sturgeon, Esq., Manor House, Grays, Essex; and prize for best Cock and best Hen.
 16. Second Prize—Cock and two Hens, hatched 3rd of March—A. C. Sayers, Esq., Clavville House, Andover.
 17. Highly commended—Cock and two Hens, eight months old—A. Gilbert, Esq., 17, Upper Phillimore-street, Kensington.
 21. Cock and two Hens, Cock 18 months—Mr. H. Higgs, Southampton.

Class 3.—COCHIN-CHINA (Cinnamon and Buff).

29. First Prize—Cockerel and three Pullets, hatched in March—Thomas Sturgeon, Esq., Manor House, Grays, Essex.
 41. Highly commended—Cockerel and three Pullets, eight months—C. Punched, Esq., Blunt's Hall, Haverhill, Suffolk.
 42. Commended—Cockerel and three Pullets, hatched last week in March—Mr. Wheeler, Commercial Road, Southampton.

Class 4.—COCHIN-CHINA (Cinnamon and Buff).

47. Commended—Single Cock, 10th March—Mr. R. Griggs, Marchwood.

Class 5.—COCHIN-CHINA (Blown and Partridge).

53. First Prize—Cock and two Hens, chickens of 1851—C. Punched, Esq., and prize for best Cock and Hen.

Class 11.—COCHIN-CHINA (White).

72. First Prize—Cockerel and three Pullets, hatched 29th of May, £4 10s.—C. Chase, Esq., Turwick, Petersfield.

Class 12.—COCHIN-CHINA (White).

73. Prize—Single Cock, one year—A. C. Sayers, Esq., Andover.

Class 13.—COCHIN-CHINA (White).

74. Prize—Single Hen, hatched 23rd of April—A. C. Sayers, Esq.

Class 14.—DORKING (Single-combed).

77. First Prize—Cock and two Hens, 14 months, £5—Mr. James Lewry, Handcross, Crawley, Sussex; and prize for best Cock and Hen.
 76. Second Prize—Cock and two Hens, old—Lady M. Macdonald, Woolmer, Liphook, Hants.

Class 15.—DORKING (Single-combed).

83. First Prize—Cockerel and three Pullets, five months one week, £4 4s.—Capt. W. Hornby, Knowsley Cottage, Prescott, Lancashire.
 81. Highly commended—Cockerel and three Pullets, five months and one week, £4—Mr. James Lewry.

Class 16.—DORKING (Single-combed).

84. Commended—Single Cock, two years old—H. Holloway, Esq., Marchwood.

Class 18.—DORKING (Double or Rose-combed).

86. Second Prize—Cock and two Hens, old, £10 10s.—Lady M. Macdonald, Woolmer, Liphook, Hants.

Class 19.—DORKING (Double or Rose-combed).

89. First Prize—Cockerel and three Pullets, five months two weeks, £1.—Mr. James Lewry, Handcross, Crawley, Sussex.

Class 22.—DORKING (White).

91. First Prize—Cock and two Hens, fifteen months, £3.—Mrs. Mills, Bisterne, Ringwood, and prize for best Cock and best Hen.

Class 23.—DORKING (White).

94. First Prize—Cockerel and three Pullets, six months, £2 10s.—Mrs. Mills, Bisterne, Ringwood.

Class 25.—DORKING (White).

95. Commended—Single Hen—N. Antill, Esq., Portsea.

Class 38.—GAME (Duck-wing and other Greys and Blues).

98. First Prize—Cock and two Hens, 20 months, £2—G. E. Lowman, Esq., Lyndhurst; and prize for best Cock and best Hen.
 97. Second Prize—Ditto, 20 months, £2 10s.—Same.

Class 50.—SILVER-PENCILLED HAMBURGS.

100. First Prize—Cock and two Hens, 18 months—Mrs. Mills, Bisterne; and prize for best Cock and best Hen.
 101. Second Prize—Cock and two Hens, three years, £1 1s.—W. G. Chambers, Esq., Portsmouth.

Class 51.—SILVER-PENCILLED HAMBURGS.

102. First Prize—Cockerel and three Pullets—W. G. Chambers, Esq.

Class 54.—SILVER-SPANGLED HAMBURGS.

103. First Prize—Cock and two Hens, Cock and one Hen three years, and one Hen 1853—W. G. Chambers, Esq.; and prize for best Cock and best Hen.
 105. Second Prize—Cock and two Hens, 15 months—Mrs. Mills.

Class 58.—MALAY.

109. First Prize—Cock and two Hens, two years—A. C. Sayers, Esq., Clavville House, Andover; and prize for best Cock and best Hen.

Class 59.—MALAY.

110. First Prize—Cockerel and three Pullets, hatched in May—C. Rawson, Esq., the Hurst, Walton-on-Thames.

Class 62.—POLAND (Black with White Crests).

112. Second Prize—Cock and two Hens, two years, £10—Mr. T. P. Edwards, Lyndhurst Railway Station; and prize for best Cock.
 113. Cock and two Hens, seven months, £10—Same; and prize for best Hen.
 111. Highly commended—Cock and two Hens, 16 months, £3 10s.—Mrs. Mills.

Class 63.—POLAND (Black with White Crests).

114. First Prize—Cockerel and three Pullets, five months, £5—Mr. T. P. Edwards.

Class 82.—SPANISH.

- First Prize—Cock and two Hens, 18 months, £4 4s.—Captain W. Hornby, R.N., Prescott, Lancashire; and prize for best Cock and Hen.
 Second Prize—Cock and two Hens, 18 months—Mrs. Mills.

Class 83.—SPANISH.

125. First Prize—Cockerel and three Pullets, five months and eight days. £3 8s.—Captain Hornby.

Class 87.—PIGEONS.

- First Prize—For Capuchins, Tumblers, and Carriers—Dr. Wesley, Winchester.

Class 88.—DUCKS.

- First Prize—Drake and two Ducks (Aylesbury), two years—Mr. T. P. Edwards, Lyndhurst Railway Station.
 157. First Prize—Drake and two Ducks (Rouen), eight months, £3.—C. Punched, Esq., Blunt's Hall, Haverhill, Suffolk; and highly commended (Rouen), full age, £3.
 Second Prize—Drake and two Ducks (Aylesbury)—Captain W. Hornby, R.N., Prescott, Lancashire, 5½ months, £1 12s.
 154. Commended—Aylesbury—Mr. W. B. Page, Hill, Southampton.

Class 89.—GEESE.

162. First Prize—Gander and two Geese, 1851—G. Bridger, Esq., Chilcombe.

Class 90.—GUINEA FOWL.

168. First Prize—Pair of Guinea Fowls, 16 weeks—H. Holloway, Esq.

Class 91.—TURKEYS.

170. First Prize—Turkey Cock and two Hens, light-coloured, £6 6s.—Lady M. Macdonald, Liphook, Petersfield.
 169. Second Prize—Turkey Cock and two Hens, Black Norfolk, £6 6s.—Lady M. Macdonald.

RAPID GROWTH OF SHANGHAI FOWLS.

In calculating the cost of feeding fowls, "Gallus" should certainly make a distinction between full-grown birds and chickens. While it is generally admitted that Cochin-China chickens eat more than others, that full-grown Cochins should eat less than others, will, perhaps, not be disputed, when it is remembered how large a portion of their time is passed in the brooding fit. From the comparative smallness of their eggs, they must eat much less than their rivals the Spanish; and from their natural inactivity, compared with the Dorkings and Spanish, they must require less nourishment.

With regard to those fearful eaters, Cochin-China chickens, it would be well to match them with others of exactly the same age; and to note the increase in weight of each bird. A friend of mine has a cockerel that has increased an ounce each day for some time, and now weighs 12 lbs. Pullets at a certain age increase an ounce each day until after they begin to lay; as they get to the end of the batch, they begin to decrease in weight; but before a certain age, the daily increase is less, on which account the chicks that are matched should be of the same age. I give a list of the increase in weight of seven of my Cochin-China pullets for ten days—

Hatched.	Weight	Increase.	Weight
	Nov. 3.		Nov. 13.
	lbs. ozs.	ozs.	lbs. ozs.
1. May 15	0 2½	10½	6 13
2. " 25	5 5	8½	5 13½
3. " 25	5 2½	7½	5 10
4. June 13	4 15	6½	5 5½
5. " 13	4 13	5½	5 2½
6. " 13	4 11½	6	5 1½
7. July 27	3 12½	4½	5 1

During the above ten days my hens had become broody, and had lost each nearly one ounce per day. I have not been able to prove this time what they lose during a sitting.—W. P. REEZY, Chaldon, near Coulsdon, Surrey.

BRITISH EATABLE FUNGI.

(Continued from page 166.)

Why should we despise what our continental neighbours not only use as a common food, but also consider a luxury? Is it because prejudice is one of the prevailing fashions of our land, which we feel in duty bound to follow; or is it because we have so long been ignorant of the British

estable fungi, that we consider we are now too old to be taught? No markets might be better supplied with such fungi than the English, in spring and autumn, and yet with the exception of the common mushroom, they are rarely exposed for public sale.

Out of at least thirty esculent species (including most of those eaten on the Continent) indigenous to our British isles, only two or three are commonly eaten, and this with agricultural distress and the poverty of the poor, while abundance of nutritious and wholesome food surrounds them on all sides and rots beneath their feet; food which on the Continent not only supplies the eatable diet of thousands of the poorer classes, but also luxuries to the rich, which in this land both classes of society are deprived of, and Great Britain continues to be the only country in Europe in which this valuable food is wasted and despised.

Perhaps the undisturbed peace and prosperity of our land, which enables us to cultivate and obtain abundant supplies of the productions of other countries, induces us to believe that our own natural productions are almost unworthy of notice. The Chinese present a striking contrast to ourselves, in the attention paid to their esculent vegetation, having printed annually some thousand copies of a work describing those plants which are suitable for food, and distributing them gratuitously to the poor in those localities which are most exposed to natural calamities. Such an instance of provident solicitude on the part of the Chinese, for the lower classes, may be suggestive in our own land, and a more general knowledge of native plants useful in medicine, domestic economy, and the arts, would be an important and interesting branch of education.

With the exception of the common Mushroom and the Truffle, scarcely a single species is generally known; the Morell is so local and scarce that it seldom appears at table, and the greater portion sold are probably imported. The much esteemed *Cantharellus cibarius* is but little known, except to the Freemasons who keep the secret. I quite agree with Dr. Badham, when he states, that we should be rendering a better service if we applied ourselves to the task of discriminating the esculent from the poisonous fungi, rather than condemn them universally, because we cannot at a glance select the good from the bad, and will not pay that attention to them they so justly deserve, nor does it speak favourably of the superiority of the human race, and the proper employment of their faculties, when they allow the brute creation to surpass them in their diagnosis of food.

I shall now enumerate, separately, the esculent species of most importance, as mentioned by Dr. Badham, commencing with the *Agarics*; in doing this, I shall not pretend to give the discriminating characters, as I consider no one ought to commence collecting them for the table, without some previous botanical knowledge, or the assistance of some botanical friend, in which case, of course, they would possess themselves of some scientific work upon the subject. But should they not investigate the subject themselves, I should advise them not to check the progress of others labouring in the field, while their want of knowledge will not justify them in giving an opinion, as by so doing they may injure others, without themselves deriving any benefit.

Agaricus prunulus.—This fungus is highly esteemed, and much sought after, particularly as it occurs in spring only, when fungi generally are of rare occurrence; the borders of woods and pastures is the proper place to seek it. I have not found this fungus.

A. procerus.—This is a very handsome and delicate fungus, and by no means rare, growing plentifully late in the summer and autumn, on dows, &c. I have found it abundant in Hackwood Park, near Basingstoke; on the common near Odiham; at Hornsey, Middlesex; and on the banks of Loch —, Ireland. This is a very agreeable, wholesome, and nutritious fungus in its raw state.

A. campestris.—Although most persons would feel indignant were they accused of not being able to select, without doubt, the common mushroom from its thousands of companions, it may be well to remark, that there are several varieties of the common mushroom, and that many of their despised, though equally valuable neighbours, might be recognised with equal facility, if the veil of prejudice which dims the vision was for a short time discarded.

A. exquiritus (Horse Mushroom).—This fungus is much

larger and coarser than the common mushroom, and when stewed I found it hard, and inferior in flavour; it is by many considered superior to the common mushroom for making ketchup, for which purpose it is brought into the markets for sale this autumn. I saw a basket in the Winchester market, and upon questioning the seller, she denied that they were horse-mushrooms, stating that she considered the latter poisonous; from her description, I concluded that she considered *A. procerus* to be the horse mushroom, which is known to be the most wholesome in its raw state, of any fungi. *A. exquiritus* grows abundant under trees, and in a young state is of a brilliant white, having a pleasing effect in the gloominess caused by our hanging trees. I have found it fine and abundant at Archer Lodge, near Basingstoke, and on the banks of Lough Neagh, Ireland. Abundant in autumn.

A. oreades.—This fungus, of course, is well known as the Champignon, but caution must be taken in collecting, as two poisonous species nearly allied are occasionally found in company with it, namely—*A. dryophilus*, and *A. semiglobatus*; it is of so common occurrence in autumn, forming the fairy-rings, that I consider it unnecessary to quote localities.

A. nebularis.—This *Agaric*, which is considered rare, I have found sparingly at Archer Lodge, beneath fir-trees, has a very agreeable flavour when toasted and seasoned with pepper, salt, and butter.

A. deliciosus.—This I have heard spoken very highly of by several who have used it as an article of diet, stating that it really is as its name implies, delicious; unfortunately I never found but three of this species at the locality last named, and, therefore, cannot speak from experience of its good qualities.

A. atramentarius and *A. comatus*.—These are so similar in appearance, occur so frequently in the same localities, and require the same treatment for the table, that I shall consider them together. I have found them both near Archer Lodge, and on the banks of Lough Neagh, Ireland. I have also found *A. comatus* in a lane near Winchester, and *A. atramentarius* beneath the willow-trees on the banks of the Basingstoke Canal.

A. orcellus.—This, which I consider the sweetest of all the *Agarics*, I found abundant in Hackwood Park, and Archer Lodge, growing beneath the shade of trees in considerable abundance.

The following esculent *Agarics* I have not yet found:—*A. heterophyllus*, *ostreatus*, *rubescens*, *melleus*, *ulmarius*, *fusipes*, *vaginatus*, *violaceus*, *castaneus*, *piperatus*, *virginicus*.

Lycoperdon plumbeum.—This fungus I have found in Hackwood Park; also, *L. bovista*, in Tangier Park, near Basingstoke. The *Tuber cibarium* (Truffle) is also abundant in the beach plantations about Hackwood; also, the *Helvella crispa* I have found in great abundance in the same locality. I have also found it in the plantations at Avington Park, near Winchester.

Boletus edulis and *scaber* I have found abundant and fine in the oak woods at Pamber, Hants; the *B. edulis* also in oak woods at Otterbourne, Hants, and Hornsey, Middlesex; and *B. scaber* very abundant under fir-trees at Archer Lodge.

Morchella esculenta.—I found one plant of this some years back, I regret to say before I knew its good qualities; it was looked upon as an object of considerable curiosity, and then cast away.

In conclusion, I will give a list of esculent fungi on which, as I have not found them, I cannot pass my opinion. *Amanita Cæsarea*, *Cantharellus cibarius*, *Clavaria coraloides*, *Fistulina hepatica*, *Hydnum repandum*, *Morchella armillifera*, *Peziza acetabula*, *Polyporus coryphinus*, and *frondosus*.

F. YORKE BROGAS.

THE DECOY-POND AND ITS WATER-FOWL.

A WALK of about two miles from my residence, over hilly heaths, brings me to a wild and solitary spot—a sort of deep valley, or glen. It appears as if a whole wood had been sunk into it until the tops of its loftiest trees were brought upon a level with the summits of the surrounding hills. Access can only be had to this sylvan retreat by applying to the keeper, an old Robinsof, Crasoe kind-of-man, who has

had charge of the place for the last twenty-two years, and who lives in a cottage close by. Furnished with an ignited piece of peat, that the birds may not, by scent, be made aware of any human approach, you enter through a rustic gate, overhung with foliage, and after winding your way for a short distance, amid gloom and underwood, emerge upon the edge of a beautiful expanse of water—a miniature lake, in which the shadows of the surrounding trees are reflected, and their branches dipping. A more lovely and sequestered scene can scarcely be conceived. Upon the water are wild-fowl, diving, sporting, or preening their feathers; these are the decoy-ducks, and this is the decoy-pond. A rivulet enters the glen at one end, and has been stopped up at the other; this occasions the water to overflow its banks and form into a basin; and the water can be raised or lowered at pleasure by means of the sluice-gate. But to render the pond complete for the purpose of taking wild or water-fowl (the terms are indifferently used), it is necessary to have an outlet at each of the four points of the compass, for the birds to pass up, as they will only enter that one down which the wind is blowing. The outlet or pipe, as it is called, is formed by making a cutting about eight or ten feet wide leading from the pond, and gradually diminishing in size as it curves to a point. It is crescent shaped, or resembles in form the blade of a common scythe. Over this arches are fixed, by means of hoops and upright stakes, leaving within the pipe, on each side, a bank of about two feet wide. The arches, or arch, for it is a continued series, tapering to the end, is covered with netting, and when finished exhibits a tube or tunnel. The earth which is dug out of the cutting is placed on the outer or convex side of the pipe, and forms a bank, behind which the decoy-man can pass without being noticed by the birds inside. Along the inner or concave side of the pipe, screens made of reeds are placed at an angle of about forty-five, inclining towards the pond, so that a person standing where these screens converge towards a point can see between them, and command a view of the whole length of the tunnel. There are five of these pipes in this decoy, and these, with a few minor appliances, and a rustic shed or two for holding baskets, tools, &c., complete the establishment.

Water-fowls are winter visitors, and usually begin to arrive in the first or second week of October, and leave at the end of March. Unlike other birds, they feed at night, and resort to the Decoy-pond for rest and security during the day. They are very timid and watchful; nevertheless, their vigilance is overmatched by human stratagem; and their place of safety becomes a trap. The birds principally caught in this pond are, Wild Ducks, Teal, and Widgeon. The Teal and Widgeon prefer deeper water, and frequent a pond near by. 5311 Wild Ducks, beside other fowl, was the number which the decoy-man informed me that he had taken in the last of what he called the good seasons, seven years ago; since which the birds have greatly decreased, and he seldom captures now more than one-third or one-fourth of that number. He attributes this falling off to the mildness of our winters, and the eggs, feathers, and flesh of the birds being more sought after in their native haunts.

Birds rise at dusk, that is, they leave the pond for their feeding places; and it is a beautiful sight to stand at a distance, at sun-set, and see hundreds of them emerge from the centre of the wood like steam of a cauldron; they return again at break of day in small flocks. For the first month after their arrival, the birds are allowed to pass to and fro, and remain in the pond undisturbed; during this time and a little before, the half-domesticated decoy-ducks, which have catered for themselves in the pond during the summer, are fed in and about the pipes, to induce them the more readily to enter them. In the morning, after noticing the direction of the wind and lighting his piece of peat, the decoy-man proceeds cautiously to reconnoitre the pond, and, if all is favourable for his purpose, he commences the work of capturing: this is usually effected by tempting one of the decoy-ducks up one of the pipes by means of hemp-seed, small portions of which are thrown, from time to time, before them as they advance; the decoy-man, the meanwhile, being concealed behind the outer-bank, or inner-screens. The wild fowl accompany the decoy ducks, and when a sufficient number have entered the pipe, and passed far enough up it, the decoy-

man suddenly shows himself behind them, and the birds rush pell-mell to the smaller end, where they are taken off in a hoop-net, and killed upon the land. Should, however, the birds appear dull and inclined to sleep, recourse is had to the dog, not to drive, but to allure them. He is sent to the edge of the pond nearest to where the greatest number of birds are situated, suitable for working; he there snuffs about, and being regarded by the birds as an intruder, they rush towards him to drive him away—he knows his business, and leads on to the mouth of the pipe, which he enters, continuing along one of its banks, and, by a series of manoeuvres, entices them onwards until they are secured and taken as before. Easy as it may seem, to write about these birds, it is not so easy to catch them. Much skill, patience, and perseverance are needed; many disappointments are undergone, and exposure to wet, cold, and fatigue, and that for hours together, in the severest weather, have often to be endured by the decoy-man before he accomplishes his object.

The man, his dog, his cottage, and his haunts, have a wild look about them, and particularly the former when seen stealthily moving amid the dark shadows of the wood, with his fur cap on, and which is made to resemble an animal when he is peering over the top of a bank, or fence. In winter, the man is paid by the dozen for all the fowl he takes; and in summer, by the week, for repairing the nets and keeping the place in order.

Wild ducks are fond of frequenting creeks, bays, harbours, and tidal rivers; they hunt along the margins of them for eels, small fish, and crustaceae; pick up the offal from vessels, and such as is brought down by the ebb-tide from towns. When the weather is mild and open they return to the decoy-ponds, well-fed, dull, and inactive, and are not so easily captured; but in severe weather, and during frosts, their supplies are diminished; fish lie deeper in the water, and crustaceae deeper in the mud; shallow places are frozen, and the scarcity is often aggravated by an increase of birds. In this state of things they may often be seen upon the decoy pond, sitting on the ice by hundreds, and they are then more active, and are easier taken. The severer the season, the richer is the decoy-man's harvest. It is not cold, but hunger which drives wild-fowl from their northern homes. Cold stops their supply of food, and sends it, at the same time, along our shores, whither the birds come in quest of it. In political economy supply follows demand: in the animal economy demand follows the supply; and it will probably be found that the migration of birds and fish are simultaneous, hunger being the motive power, and instinct the governing one. Water-fowl are an index to our fisheries; each species of birds has a predilection for a particular kind of fish; a knowledge of this, coupled with their presence in greater or lesser numbers, may enable us to form a comparative estimate of the state of our supply. What a wide and interesting field for study do the habits of these birds offer to the careful observer of nature who resides upon the sea-coast! They are living barometers, and prognosticate wind and rain, calm and tempest; in short, they are a beautiful link in the great chain of animal creation; they have a mission to execute, and they fulfil it with fidelity and precision; and does man, it may be asked, aided by the superior lights of reason and revelation, perform his part better? S. P.—Rushmere.

THE DORKING FOWL.

WHAT IT WAS, IS, AND SHOULD BE.

I VERY much doubt if our Dorking fowls were ever a distinct breed. It is certain that very few birds bearing this name have much claim to purity. The Greeks and Romans tell of a famed five-toed breed; and so our Dorkings may have been originally derived from that source.

Some years ago, a breed of fowls thus named, bred at Dorking and in that neighbourhood, to supply the London markets, were much esteemed, as are now the large Surrey fowls, which still seem to command the best prices in those markets, as table fowls. Our old Dorkings were a rather small breed of fowls, colour white, sometimes with a few grey or cuckoo-dun feathers sparingly interspersed; they

had a full rose comb, short neck, wide shoulders, full chest, were wide across the hips, had short white legs, five toes, a broad tail, and though not remarkable for laying, were frequent and steady sitters; the chicken came early to maturity, and fattened easily; and were considered the best of all fowls for eating. In some few the hind toes were even triple.

Larger fowls being required for the markets, they were crossed with large sorts, and consequently lost many of their properties; such are the Surrey and Sussex fowls of the present day: of which a great assortment is to be found. These are known by various names, but are generally called Dorkings; of which breed some have one property, some another; some of them are double combed, and others single; short or long legged, four or five toed, being of no particular stamp or breed, and little better than a set of mongrels: their only recommendation is, that they are easily obtained, and, being good eating, are readily disposed of (at a price). Fowls of this nondescript variety of Dorkings are very plentiful in Kent, Surrey, and Sussex, and are considered good by some.

To these some persons are adding a dash of China blood; but they will still bear the name of Dorking fowls.

The improved Dorking should possess all the points of the old bird, with increased weight. Such fowls are very scarce: they appear very square-made birds, and in looking down on them seem almost as broad as long. They should have a large rose comb, short thick neck, short white legs, with five toes; altogether a rather lumpy-looking fowl.

In colour, the cocks are generally of a whitish-brown above, with a black or mottled breast, and black tail; somewhat approaching to the colour of a game cock called a Duckwing. The hens are grey, with light hackle, and sometimes slightly speckled with white. I do not, however, consider the colour of the feathers of much importance if the other properties are strictly adhered to; in which case, I think a good Dorking fowl will be found to have less oil than any other in proportion to its weight. The cocks often weigh 7 lbs., and the hens from 5 lbs. to 6 lbs., and some even more.

I fancy the Dorkings are more subject to Roup than are other varieties; as, also to diseases of the feet; and that they lose their productiveness earlier than many varieties. But I am of the opinion, that if breeders would pay more attention to the properties of those birds they keep for stock, always selecting the best shaped and healthiest fowls, and never allowing them to breed in-and-in (that is, not to let too near relations breed together), but continually introduce fresh blood, being careful to select fine birds of the same variety for that purpose, they will soon find their stock improve, as well in health and beauty as in profitableness.

Bessel's Green, near Sevenoaks.

B. P. BRENT.

THE MUSK DUCK.

At a time when we meet with so many well-written articles in your columns upon the relative qualities of the different breeds of fowls, it may not be out of place to notice those of any other species of poultry. It is the Musk Duck that I would draw attention to. I have kept them four years, having purchased a fresh-imported pair direct from South America. I find them great layers, good breeders, producing two, and often three broods in the season. The eggs are mild and well-flavoured; the flesh delicious. The drakes will, if well fed, obtain the weight of seven pounds and upwards at three months old. As a proof how prolific they are, I have had, the last two seasons, broods from ducks hatched early in the spring. I have now a brood of six, five weeks old, by a duck hatched in February last, doing well. One most desirable property is (like the Cochinchina fowls), nothing seems to hurt or put them out of the way, they are so very docile. A CONSTANT SUBSCRIBER.

MERITS OF DIFFERENT VARIETIES OF FOWLS.

We have received so many letters upon this subject, that we can do no more than select from the facts they contain, re-

jecting, without any favour, the mere expressions of opinion; for these coming from anonymous correspondents are not weighty authorities.

ENDURING QUALITY OF SHANGHAES.—*Gallina* says, "I can find a hen, imported some six or seven years ago, and not very young then apparently, that has produced this season chicks from her own eggs. As for food, good barley being at 3s. 6d. per bushel, it costs me far less than 3d. per week each, and they eat until satisfied."

EXPENSE OF SHANGHAES, &c.—*Gallus secundus, M. D.*, declares, "So clearly have I been convinced of the positive extravagance of these birds, that I have been reduced to the miserable expedient of a pun, by asserting it to be as expensive to keep a Cochinchina as to keep a coach in China! They are, indeed, veritable cormorants, and I may exclaim, with the judicious "Thanas," that two will eat as much as a pig. My experience is most unquestionably to the effect, that the Spanish are the best layers. They lay more frequently, and their eggs are larger, but they are not so good for the table as the Dorkings. The Cochinchinas are decidedly good layers, and their eggs are very rich, though small in comparison with the Spanish."

MANAGEMENT OF SHANGHAI FOWLS.—"It may be interesting to you to know that, with the exception of a few ducks, my stock consists entirely of Cochinchinas. I keep five hens and a cock, as breeding stock, having had them presented to me by a friend, who imported them last spring. I have bred several pullets this year, which promise to be better than the old birds; and my idea is, to keep them as stock for next year, and to procure a very good cock. I hope by doing so, to improve my breed; and, by selecting my best pullets annually, and changing my cock, to bring my stock, in the course of time, to something like perfection. Is this the course adopted by successful breeders? [Certainly.] In feeding my poultry, I adopt the plan of always having food in the troughs, which sometimes consists of brewer's grains mixed with meal, and sometimes of boiled potatoes and meal. In addition to this they are fed (by hand) three times a day, with as much wheat or oats as will satisfy them; and, since last spring, I have ascertained that the cost of keeping old and young has not averaged 1d. per week each: in fact, up to the 1st of September, the cost was only about 3d. per week each. This, of course, is exclusive of scraps from the kitchen; and I may add, that they have the run of half-an-acre of grass land. In selecting pullets as stock birds for next year, I have chosen all of a light buff colour, being convinced that they are not only the most handsome, but quite as hardy as the dark variety." —T. J. O.

COST OF KEEPING FOWLS.—S. states, "For the last fortnight my stock has consisted of fifteen Spanish Fowls, viz., a cock and two cockerels, three hens and nine pullets, the youngest hatched in the beginning of last April, and although they have had free access to barley at all times during the fortnight, they have not quite consumed two-and-three-quarter pecks, which, at present prices, cost in this part of the country about 2s. 3d. My fowls have the run of about twenty perches of land, part grass and the remainder gravel, and in addition to the barley there has been given them daily, part (another yard of fowls taking their share) of the refuse of the kitchen, which I should think was overvalued at one penny a day, but say 2s. 10d. for the cost of the food of fifteen fowls for two weeks, or a trifle over 1d. a week per head. I have kept poultry for some years, and have found, after repeated trials, that a quarter-of-a-pint of barley per day, for every full-grown fowl, with a grass walk not exceeding a quarter-of-an-acre, is rather more than will be consumed."

NOTES ON BEES.

I HAD contemplated that the subject of my next offering of Notes on Bees to the pages of THE COTTAGE GARDENER should have been entitled "Spring management on the moors," as a sequel to my last. But the year is gliding on so rapidly, that perhaps a review of the last season, in reference especially to the bees themselves, is more in place at present, and soon we shall look prospectively to the work of the coming spring. From the accounts received from all parts of the kingdom, it is evident that the apiaries in the

north have been more highly favoured than the southern sisterhoods. Though the spring had been unusually dry, many hives in early situations were ready for swarming the beginning of June, about the usual time in ordinary seasons; then came three weeks of chilling rains, when those beekeepers (I am sorry to say they are still numerous), who maintain that bees which cannot support themselves are not worth assisting, lost many of their stocks. In some hives the royal nymphs were destroyed (in common hives this symptom of distress cannot well be ascertained); drones and larvae (a certain sign of starvation) were brought out; while in others, without any of these precursors, families 20,000 strong ceased to exist. At last, when fine weather came, in some apiaries those hives which had received timely assistance swarmed with a determination which it was impossible to check, and in others the design of swarming was entirely abandoned. It is often difficult to understand the operations of the bees, from the very numerous combinations and circumstances which affect them; in these opposite results I am inclined to think that in those families which had been prepared to swarm two or three weeks previously, the queen had at that time finished the *great laying*, constituting the swarms; in fact, a quantity of eggs had been probably wasted, and thus, on the return of fine weather, there was sufficient vacant space for the storing of honey, as well as the deposition of eggs, in which, as Dr. Bevan observes, there is usually a relaxation in July. On this point, I only speak as compared to the prior laying, the queen still produces them in considerable quantities, as may be seen by examining the combs a few days after the swarm has been established, when many square inches will be found occupied with brood. According to the statement of Huber, in which Dr. Dunbar coincides, the diameter of a worker's cell is two and two-fifths lines, thus one square inch comprises fifty cells, including both sides of the comb. Dr. Bevan gives the dimension as two and three-fifths lines, which I think will be found the most correct measurement, and still affording a wonderful proof of the economizing of space.

The letter of Mr. H. Taylor, for the perusal of which the readers of THE COTTAGE GARDENER are much indebted to Mr. Payne, suggests subjects of deep thought to the apiarian. On the comparative merits of old and young queens, I will beg to offer a few remarks. As far as I am able to judge, more from attentive observation than lengthened experience, I am led to the opinion that a young queen will be equally prolific from the day she begins to lay eggs, *provided* all contingencies are alike. However, it must be borne in mind, that a young queen, established at the same time, and with as strong a colony as an older queen, commences her sway under much less favourable circumstances. A week, a fortnight, or even longer, elapses before she commences to lay eggs; and those apiarians whose hives enable them to view the whole body of bees at once, cannot fail to have been struck with the rapid diminution of their numbers during the working season, when there are no young bees to replace those that are lost. Then, as in spring, poverty in numbers is the parent of poverty. I have seen a queen of two months old, from this cause, laying her eggs "to mere waste," and have counted as many as three and four in one cell, while others were dropped and devoured by the workers. With profound respect for royalty, I admit having detected a queen condescending to deception. I found one of my young queens, this year, going through the routine of depositing eggs, examining the cells first, as is their wont; having reason to doubt this fact, I took out the window, and, making a minute inspection of the cells, found there was not a single egg. Next day she began to lay in earnest, but in another comb, and within a fortnight honey was stored in the cells where she had been shamming! But this is a digression, and I return to find further proof in favour of young queens. We have it on such good authority as that of Mr. Golding, that she has been known to lead off a swarm a few weeks after her birth. The second season in one summer enjoyed by bees near the moors, offers a full test of her powers. There we find stocks depopulated by swarming, and second swarms labouring under the disadvantages above mentioned, returning to their owners with as large a population as their elders possess.

For instance, this season a second swarm filled a Grecian hive, and stored six or eight pounds of honey in a glass; while of four hives sent together to the moors, three of which were swarms, and one a stock which had swarmed twice, the stock came home decidedly strongest, so full, indeed, of bees, that had the season been May instead of the end of October, I should have looked for a swarm in a few days. Yet I do not imagine a queen deteriorates before her third year at soonest; and I am glad to see so experienced an apiarian as Mr. Taylor, is of this opinion, as well as Mr. Colding, whose "old lady," at four years of age, swarmed when she was dead!

This letter is already so long, that the consideration of queenless stocks and drone-laying bees must be deferred to another opportunity, if my pen should be again employed in transcribing from notes on bees.—INVESTIGATOR.

TO CORRESPONDENTS.

WEIGELA ROSA (N. B. E.).—Surely you must know that the rose and the vine flower on wood made the same season; or, in gardener's language, on the current year's growth. The difficulty lies in this, that both the vine and the rose have been, or may be, pruned as close as to the last eye of the young wood, and to any other eye from the last to the one at the end of ten, twelve, or fourteen feet; therefore, they are not very good examples to teach the pruning of other plants from. It is a rule that ought not to be slightly broken, that all plants, when removed from one place to another, or transplanted, should be pruned in some way or other. Roses, low plants, and shrubs, like your beautiful Weigela, should be cut down to within a few eyes of the young wood; and stronger things, as large trees, only to be thinned of shoots, or cut according to the extent, the vigour, or the mutilation of the roots in the removal. But cases do occur, and yours is one of them, where it goes against the grain to fulfil the laws of pruning to the letter. For fear of misleading others, we must state your case before we advise you, however. You planted your Weigela this autumn, and it has from fifteen to twenty shoots rising directly from the crown or collar of the plant, their average height being three feet. This tells a tale. This plant was too large for the space for it, or else it was too straggling, and they cut it down to the ground to renew it. The shoots are now too numerous for a plant not transplanted; and one that has been lately removed must have about one-half of these shoots—the weakest ones—cut in from three to six inches in length; then take three of the strongest shoots, not cut, in your left hand, and cut off five or six inches from the points—then let them go; now, with your eye, measure the best distances between the topcuts and the bottom cuts, for cutting back the remainder of the shoots at different distances. Give the plant a good watering in April, three in May, and four in June—three or four gallons each time—and let us hear next August how it looks, &c., &c. In another year you will cut out all the very weak shoots and as much of the older wood as will keep the head regular, and the young shoots you will cut back, some to one-half their length, and some to one-third.

SHADED BORDER (R. A.).—What will grow on a five-feet-wide-border sloping a little to the north-west, and shaded with high laurels that may be cut down considerably? This question admits of many answers, yet none of them might be to your liking. Tell us what you would like there.

PRUNING STANDARD CHINA ROSES (A. J. F.).—It is not easy to answer about the pruning of monthly China Roses that are now straggling. The smallest Roses known are among the monthly Roses, and the very strongest also, as *India major*, and every degree of strength between these extreme points are also found in monthlies. Now, we all know that these, and every other Rose, will get straggling in time, unless they are attended to; but about the pruning of monthlies, without knowing what kind of monthly they are, is more than is safe to undertake honestly, without writing an essay to include all the possible shades of pruning. In a general way, very strong Roses must not be pruned at all on standards; that is to say, not much shortened; whole shoots cut out entirely, to leave more room for others, is the rule; standards, not very strong, may be pruned according to the degree of strength, without reference to what section they may belong to; and weak-growing standards must be pruned close, under any circumstances.

TRICOLORUM TRICOLORUM (Michel).—There is nothing unusual in your plant starting vigorously and making as yet few leaves. You will have plenty by-and-by; the symptoms are quite promising. Do not give too much water in this dull weather. Let the pots be filled with roots before you soak the soil freely.

PLEUROMA ELIGANS (Ibid.).—How and when to propagate? In early spring, take off the points of half-ripened shoots; or, better still, select some shrubby side-shoots from two to three inches long; cut them across at a joint, and remove one or two tiers of the lower leaves; then plant them firmly in silver-sand, over sandy-pot, well-drained; water; allow to drain, and the tops to dry; then place over them a bell-glass, and plunge the pot in a sweet, mild, bottom-heat. After a few days, lift the corner of the glass at night, to prevent damping and to admit fresh air, and replace the glass firmly again in the morning, shading as much during the day as will prevent the shoots flagging, and no more.

WATSONIA PULGIDA (Troublome).—This growing in the border, may be left there with the protection of a hand-light; but we think you would be better pleased with the blooms if you lifted it carefully, potted it, and kept it in a cold pit during winter.

BIGNONIA RADICATA MAJOR (Ibid.).—The pot of this has been cracked, and then inserted in a deep, rich border, but the plant has not grown more than two or three inches since May. Examine the roots; remove at least part, if not most of the pot; and trace out the roots with the hand; and give them a little sandy-loam and peat, or leaf mould, to ramify in at first, and you will, most likely, have growth enough next year.

T. R.'s MODE OF PROPAGATING AND PRESERVING VERBENAS (Ibid).—This mode is at page 374 of our last volume. We cannot say whether T. R. possesses a mild climate or not. In any climate in this country his mode would answer well for propagating; and with care in protecting, especially with waterproofed material as overalls, we should see no great difficulty. We are, however, no advocates for hand-lights for such purposes. You might have a glazed frame, and each light would cost you little more than a glazed hand-light, while there would be no comparison of the available surface-soil. In a frame or pit they would keep nicely under such treatment, and involve less labour than under hand-lights. See what Mr. Fish says to-day.

ALLAMANDA IN POTS (A. Bartleman).—You speak of having large old plants, and ask when to start them? As soon as you like. Cut back the long shoots of this year's growth to from six to twelve inches of the previous year's wood, allowing the leaves to remain on the wood left. After that, just see that the soil is not dry, as it is desirable to swell the buds left. An average temperature, from 58° to 60° at night, will do. When the days lighten and lengthen, in February, or before, add 10° or 15° to the temperature, and syringe the stems as well as water the roots. When the young shoots are several inches in length, give what shifting the plant requires, using rich rough loam and a little peat, and a pot not less than twelve inches in diameter, and a trellis at least three-and-a-half feet in height by two-and-a-half in diameter. When freely growing, give manure-water liberally. Success depends upon the vigour of the young shoots, and their being well exposed to light. *Allamanda nerifolia* may be grown in a pot as a shrub; the others require a considerable amount of room, whether on a trellis or a rafter.

VARIOUS.—Margaret, living in North Wales, kept 260 plants last winter in five windows, including Verbenas, Petunias, &c.; but has no greenhouse. 1. *Lotus Jacobæus* is rather a bad thing to keep; you did right not to pot it. You should not have given it a very rich compost at this season as a top-dressing. Prune away all the decaying and withered parts, and give no more water than will just keep it from flagging; and if you preserve life it will thank you for all the labour next summer. 2. *Lily-like plants*.—We can hardly make out whether your plant is a Lily, a Calla, or an Arum; but in its present symptoms you had better let it die down, but not to be quite dry. Any darkish place free from frost will do. 3. Your *Fern-looking* plant keep rather dry for a few months, and then water it freely. It is hardly worth growing. 4. *Mimulus* that have lost their leaves.—Do not repot now; just keep them a little moist at the root, but they will want little water until the leaves break afresh in the spring. We fear they will be rather strong-growing for the window. Before they break they will not require much light. 5. *Astro-meria* nearly dying down.—Give them no water. They may be kept anywhere, where shelter from frost and wet can be afforded them. If you intend to grow them in pots, fresh pot before growth commences. 6. *Tropæolum* on a trellis.—Do not interfere with the tuber until the foliage has withered, nor for a short time afterwards. You may then take it up; place the tubers in a small pot surrounded with earth, and give no water; but when the young shoots begin to move, put in a similar pot to that the plant is now growing in. Any place in the room will do now; it must have all the light possible when growing. See another answer to a correspondent. 7. *Cactuses*.—Do not think of moving them to a dark place; give them what light you can. Give no water unless they shrivel much, but avoid the least frost. Your success is very creditable to you; your mode of giving air in winter by the top of the window is admirable, and knowing such results lightens labours that otherwise would not be easily borne.

NAMES OF PEARS (G.).—Passe Colmar. (W. B. N.).—So far as we can judge from the sketches sent, undertaking it for granted that the fruit is at maturity now, we should say No. 1 is *Passe Colmar*, and No. 2 either *Calebasse*, or *Bœurré Rose*; but this, of course, is mere guess-work in absence of the fruit itself.

ORCHIDS (A. M. S.).—Such delicate flowers as you sent should always be put into a tin-box, and be packed amongst soft, damp moss; put between thick paper as yours were, they are sure to be crushed coming through the post-office. They were flattened, and the colour squeezed out completely. As far as we could judge, they are—No. 1. *Zygopetalum Mackayi*. No. 2. *Zygopetalum crinitum*. No. 3. *Maxillaria picta*.

GIBBULUS GANDAVENSIS (Cato).—This should have been planted last month, but as the weather has been so dreadfully wet they may be planted now, or as soon as we have three consecutive fair days. Mr. Appleby is preparing lists of all the best floriferous flowers, and will give the Chrysanthemum very soon. For its culture see the back numbers of THE COTTAGE GARDENER, or THE Cottage Gardeners' Dictionary.

ZERO.—We have written to the gardener, and as soon as we receive his answer you shall know.

LAYERING CARNATIONS (A Real Cottage).—You do not say whether you grow your Carnations in pots, or in the open border. We suppose the latter. You may thin out the shoots, if numerous, and peg the remainder down the leaves. Lay a little good, rich earth over the bare shoots, and do not neglect to layer them next August, or they will most probably run their colours. It is a great pity you have not layered them, for even with the above care you will find them much injured in respect to the properties they would have had had they been layered at the right time.

VARIOUS (C. C.).—*Combretum Purpureum*. Plant this as you propose doing in the back border near the furnace. *Allamanda Schottii*, keep in a pot at the warmest end of the house; but we give you little hope of doing good with either, if your house is merely kept from being lower than 40° at night. Let it range from 50° to 55°, and you will find all will do well; but those heats would be too high for common greenhouse plants. The *Iporosa* best next to *Leurli* for a greenhouse, and not liable to spider, we think, is *Sedum*. It will contrast with *Leurli*, being a reddish-pink. But you must keep your eyes about you, as *gery Iporosa* is liable to spider if not duly watered and syringed. *Jasminum Sambac*. This you can only grow successfully in the temperature recommended above for *Allamanda*, though 5° less would do if not of long continuance; then give it a warm position. But if 40° to 45° be your average range at night, I would advise you to substitute *Jasminum gracile*, or *J. grandiflorum*, in its stead. The *Gracile* is a very short thing, that will do well either in a pot or against a pillar.

These two hints we would give you as a young beginner. 1st. Do not make a bugbear of insects. Every plant is subject to them if neglected. Care and attention will always keep them at a distance. We have seen people in a pretended agony about an insect-covered plant in a window; and yet five minutes use of their own fingers, and a drench from the rose of a water-pail, would not have left the vestige of a living thing upon leaves or stem. 2nd. Never go to the expense of getting large plants in pots like the *Combretum* sent to you, until you have previously ascertained if such a plant will suit your circumstances. As you have got it, try it in the place indicated. Your warm position and full exposure to sun may do much.

POLAND versus HAMBURGERS OR DUTCH.—“IN THE COTTAGE GARDENER for November 18th, I observe a correspondent complains, that I have endeavoured to overset a uniformity of nomenclature respecting the Dutch Every-day-layers. I beg to state that such is not my desire; I only oppose the application of the name of Hamburgers to them, as it is the only one by which the mongrel Poles are known; whereas, the Dutch Every-day-layers have many, and ought to be satisfied. A ‘Fowl Fancier,’ at page 134, of the same number, while speaking of the Shanghaes, says:—‘It is a libel to call the gangling, half-Malay creatures, which are so common, by the aristocratic title of Shanghaes.’ Now, this is exactly my opinion about calling the Hamburgers Poles. And, however unpleasant it may be to those keeping them to be told, that the least appearance of comb shows impurity, it is nevertheless true. My wish is to have things called by their right names, and to save, if possible, the true Poles, ere they become extinct. It is no new scheme of mine; for if your correspondent will refer to Mr. Trotter’s Prize Essay, as it stands in *The Royal Agricultural Journal*, he will find them noticed separately there, although he has altered it in the separate edition of the same. Mr. Dixdon’s description of the Poland fowl I do not consider taken from good birds; but Mr. Richardson’s description of them is excellent; but in the later enlarged edition of his work, some friend has tried to make him fashionable too, by mixing together what he had separated. I have not read Mr. Bailey’s book, but will do so. It has become too much the fashion to call all tufted fowls, Poland, and all five-clawed fowls Dorkings, which I consider greatly injures the purity of those varieties.”—H. P. BAKENT.

BUTTON IN SURREY (W. E. J.).—The soil of which you require information in Surrey, is a fair, sandy-loam, resting on the chalk formation. It is well adapted to the cultivation of common fruits, vegetables, and flowers. In that county, not very far from the place you name, there are large fields devoted to the cultivation of Lavender, Peppermint, Chamomille, and other flowering plants—we allude to the adjoining parishes of Mitcham, Carshalton, &c. Water is there obtainable from either wells, springs, or rain. Let “W. E. J.” remember that it is found that sufficient rain falls on every house in England to supply its inmates with water. As to the rest, consult any Croydon land-agent or auctioneer, such as Blake, or Fuller, or Stedall.

ERRATA.—At page 143, for *Azalea* read *Arbutus*; at page 143, for *Tilsoe* read *Silcoe*.

MR. STURGEON’S SALE (A Fancier of Cochins).—Lot 101, the cockerel by Jerry for which £12 10s. were given, was bought by Mr. Hodgkinson, of Birmingham.

WORKING GARDENERS’ SOCIETY (A few Working Gardeners).—Let us know what funds you have or can command.

BOOKS (I-forget-my-Name).—Buy Loudon’s *Self Instructor for Young Gardeners*. You do not want any instructions for preserving botanical specimens. Put each between several sheets of blotting-paper, and press it moderately till dry.

DAMP (1001).—“Steam” is not generated in a cold pit, the damp condensed on its glass arises from the exterior cold causing the air within to deposit its moisture. You understand our directions quite correctly as to the application of the peat, &c.

REMOVING VINE BARK (R. S. E.).—What says “F.”? “Nature never gave Vines bark that should be taken off by the hand of man; it was given them for a wise purpose, and, therefore, should not be removed again.” Now this is neither so philosophical, nor even so reverential, as appears at first blush. Suppose we can admit, with “F.” that it was given for a wise purpose, and removed for one equally wise—where is “F.’s” philosophy? It so happens, that our gracious Creator has not tied our hands in the use of material things very tight, or we had not been permitted even to prune away branches! But “F.” should distinguish between a live bark and a dead bark. In our plan we take no living organs from the tree: only one crime we commit—we take away a very good non-conductor of heat, one which even in its decay doubtless subserves a very useful end. A tree with coarse dead bark on will neither become so rapidly heated nor cooled as a bare and polished one. So far so good. But we “give a sprat to catch a herring.” We can, *in-doing*, manage all about these conducting powers easier than we can manage mealy bugs, the concealed spores of destructive fungi, &c. And this, as we conceive, is a justification of the practice, which, however, is established beyond all cavil, by the best gardeners in the kingdom. Prune your *pearl-trees* any time from now to the end of January; get them nailed also, providing you can hang canvases or houghs over them directly. Like the bees, they do not require to be awakened in mid-winter.

PRUNING PEACHES AND APRICOTS (H. M. S.).—Prune your Peaches, but rather leave your Apricots till the first week of February. You cannot well distinguish the blossom-eyes on the young wood, or even the spurs. Look at an answer to “R. S. E.”

VINE BORDERS (A Country Gentleman).—If your Vines have been un- luckily concreted on the surface of the border—a notion unworthy of the age—we say, pull it all off, and apply a compost, in a slight fermenting state, composed thus—ghrass, free loam, one-part; lime-rubbish, one-part; leaf-soil, one-part; and manure one-part; well-blended. If you use “well-drained below,” and your texture of soil right, pray do not take them up.

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8 " " 10 " " 40 " 45 "		0 8	0 9 1/2	0 11
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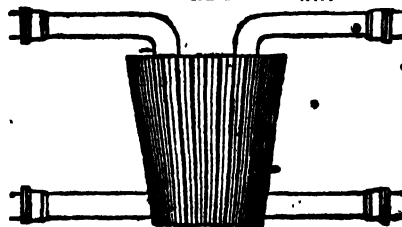
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BY THE REV. GILBERT WHITE, A.M.

A New Edition, with Notes, by EDWARD BLYTH. To which is added a Description of the Village and Neighbourhood, Written on the Spot for this Edition, by the late Robert Mudie.

WERE this edition of White's Natural History of Selborne simply a reprint, it would be sufficient merely to call the attention of the reader to its form, typographical, pictorial, or otherwise. The very mention of the work calls up, in the mind of the Naturalist, a living and affectionate reverence, and few forget the charm of its first perusal. But the present edition has claims upon the reader which ought not to be passed by, as they will amply repay any attention that he may bestow upon them.

In the first place the genial naturalist himself, the *really* Reverend Gilbert White, is assisted by two other congenial spirits, whose love for nature, and whose humble and simple minds are in unison with his own. Mr. Edward Blyth has brought his store of useful and entertaining knowledge, in the shape of a series of notes, to enrich the volume; and Robert Mudie has contributed a description of the village and neighbourhood of Selborne, which was written on the spot, and must have been inspired by the *genius loci* that ever clings to such places.

The notes are so numerous that they form, as it were, a distinct volume, and throw a new and interesting light upon the several subjects treated of in the text. The author of the notes has incorporated the varied facts of Natural History which have been evolved since the work of Gilbert White was sent forth to the world, and which brings down the information to the present day. The description of the village and neighbourhood of Selborne, by Robert Mudie, is also an additional charm to the work, as by its indirect aid the reader acquires a greater personal identity of the genial and intelligent author of the work.

The volume is illustrated with several woodcuts of birds, scenes, and spots which are most remarkable in the history and neighbourhood of Selborne, and is accompanied with a carefully detailed index, which the reader will find especially agreeable, whether rambling through the fields in search of the existing representatives of the objects described, or quietly seated in his library arm-chair and ideally contemplating them. A Map, likewise, of the Environs of Selborne, from an engraving on steel, is a useful addition to the work.

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AND

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No. 220.]

THURSDAY, DECEMBER 16, 1852.

[PRICE 3d.]

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This Advertisement is inserted in consequence of Mr. Gaines having taken advantage of its notoriety by naming a flower of his own "Attraction," which has never been exhibited.

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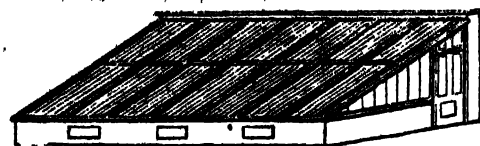
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WEEKLY CALENDAR.

M. D.	W. D.	DECEMBER 16—22, 1882.	WEATHER NEAR LONDON IN 1881.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock aft. Sun.	Day of Year.
			Barometre.	Thermo.	Wind.	Rain in In.						
16	Tu	Cambridge Term ends.	30.955—30.525	42—39	S.W.	—	3 a. 8.	4 p. 3.	9 55	5	3 54	351
17	F	Oxford Term ends.	30.301—30.252	44—38	S.	—	4	49	11 8	6	3 25	352
18	S	Eriogaster Populi found.	30.185—30.155	45—34	S.	—	5	50	morn.	3	2 55	353
19	Su	4 SUNDAY IN ADVENT.	30.118—30.095	42—43	S.	01	5	50	0 16	8	2 25	354
20	M	Sun's declination 23° 27' S.	30.087—30.068	43—45	S.W.	02	6	50	1 23	9	1 55	355
21	Tu	St. Thomas.	30.760—30.564	40—38	S.	15	6	51	2 30	10	1 25	356
22	W	Black Duck comes.	30.582—30.543	46—35	E.	31	7	51	3 37	11	0 55	357

METEOROLOGY OF THE WEEK.—At Chislewick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 45.3° and 34.3° respectively. The greatest heat, 58°, occurred on the 16th in 1849; and the lowest cold, 14°, on the 16th in 1849. During the period 22 days were fine, and on 23 rain fell.

BRITISH WILD FLOWERS.

POPPY-WORTS.—PAPAVERACEÆ.

CHARACTERS OF THE ORDER.—*Sepals*, two, deciduous. *Petals* below the ovary, either four, or some multiple of that number, inserted in a cross form. *Stamens* below the ovary, either eight, or some multiple of four, generally very numerous, inserted in four parcels, one of which adheres to the base of each petal; anthers two-celled, inflate. *Ovary* solitary; *style* short or none; *stigmata* alternate with the placenta, two or many; in the latter case star-shaped upon the flat top of the ovary. *Fruit* one-celled, either a long pod with two placenta attached to its sides, or capsular with several placenta. *Seeds* numerous. *Albumen* between flesh and oily. *Embryo* minute, straight, at the base of the albumen, with plano-convex cotyledons.

PAPAVER. POPPY.

GENERIC CHARACTER.—*Calyx* below the ovary, of two egg-shaped, concave, blunt, equal, deciduous leaves. *Petals* four, roundish, crumpled, spreading, large; narrowest at the base; two opposite ones smallest. *Stamens* very numerous, filaments hair-shaped, much shorter than the corolla. *Anthers* terminal, erect, somewhat stalked, oblong, blunt, compressed. *Germen* roundish or oblong, large. *Style* none. *Stigma* round-shield-like, radiated, downy, permanent. *Capsule* egg-shaped or oblong-reversed egg-shaped, leathery, large, of one cell, incompletely separated into a greater or less number of marginal cells, answering to the number of rays in the stigma, between which the capsule bursts by as many valvular openings, under the stigma, which is more or less elevated by the incomplete partitions. *Seeds* kidney-shaped, numerous, minute, dotted, attached to the parietes.

Section 1.—Poppies with bristly capsules.

PAPAVER ARGEMONE; Long-prickly-headed Poppy; Wind-rose; Long-headed bastard Wild Poppy.



Description.—It is an annual. *Leaves*, pinnate, and the pinnae opposite to each other, and deeply pinnatifid, the end pinna being three-cleft; upper side nearly smooth, nerves beneath, and the leaf-stalks rough with spreading hairs. *Stem* leafy, about a foot high; this and the flower-stalk clothed with hairs pointing upwards. *Calyx* hairy. *Petals* wedge-shaped, narrow, often jagged, pale coppery-scarlet, with a black spot at the base, a little distant from each other, and falling in a few hours after opening. *Germen* reversed-cone-shaped, with a stigma from four to six rayed. The germen becomes a capsule having as many cells as the stigma has rays. The capsule is purplish, ribbed, and covered, but most thickly at its upper part, with white bristles, which point upwards. *Stamens* about twenty, with purple filaments; the anthers suspended by a fine thread from the top of the filaments; pollen bluish. *Seeds* blackish.

It is sometimes found with double flowers, but *Papaver maritimum* of Withering is only a starved specimen of this species.

Places where found.—Corn-fields, especially where the soil is sandy or gravelly.

Time of flowering.—June and July.

History.—This plant is found not only in all parts of Europe but in the Levant; but though so common is frequently unnoticed, owing to the speedy dropping off of its petals. *Argemone* is the old Greek name for this plant, and so called because its juice was found to allay the inflammation of the eyes, known by the name of *Argema*. The bruised plant was also recommended to be put upon the black or blue marks caused by any violent blow.

PAPAVER HYBRIDUM; Bound prickly-headed Poppy. Bastard Wild Poppy.

Description.—It is an annual. *Root* small and tapering. *Leaves* doubly pinnatifid, the segments being numerous, narrow, nearly equal, slightly bending back, and each tipped with a bristle; the pinna at the end of the leaf three-cleft; upper side nearly smooth, but the nerves beneath covered with bristles pointing upwards. *Stem* from twelve to eighteen inches high, this, as well as the branches and footstalks, which are channeled, covered with similar bristles. *Calyx* oval, and slightly hairy. *Petals* small, dingy-scarlet, often violet at the base. *Stamens* with purple filaments, and bright blue anthers. *Stigma* from five to eight rayed, and rather raised above the capsule. *Capsule* furrowed lengthwise, and thickly clothed with tawny bristles, pointing upwards.

Places where found.—In sandy and chalky fields; rare.

Time of flowering.—July.

History.—Never was a specific name more misleading than *hybridum* applied to this Poppy, for it is a true and permanent species. Gerarde says, speaking of both the species—"These plants do grow in the corn-fields in Somersetshire, and by the hedges and highways as ye travel from London to Bath. Lobel found it growing in the next field unto a village in Kent, called Southfleet, myself being in his company, of purpose to discover some strange plants not hitherto written of." Its medicinal powers were considered by the old herbalists to be the same as those of the preceding. (Lindley. Smith. Martyn. Gerarde.)

MANY of our readers have heard or read of the difference of opinion which exists, respecting the true origin of that anomalous production—the purple Laburnum, *Cytinus Adami*. Some believe it to be a cross-bred plant between the common Laburnum and the purple *Cytinus*, while others as firmly assert that it must be the result of artificial treatment, although the facts respecting the process have escaped notice. The question is, therefore, still at issue, no clue having hitherto been discovered to decide it either way. Mr. Adam, in whose nursery, near Vitry, in France, it was originated about the year 1825, believed it to have issued from a blind bud of the purple *Cytinus* inserted in the Laburnum as a stock in the common way, as related in the Annals of the Horticultural Society of Paris in 1830 by M. Poiteau. A deputation from the Society was sent, after Mr. Adam's death, to ascertain if the original plant was really a seedling or a budded plant. But the evidence of this deputation was contrary to that of Mr. Adam's, and in favour of the cross-seedling side of the question.

This gave currency to many wild and extravagant ideas on the continent as to the effect of hybridisation. The old notion, that mules can revert to one of their parents, was strongly urged by some, and this anomalous plant adduced as a strong evidence that mules could change in time to either of their parents. Even the exploded doctrine of superfecundation was revived to account for the origin of such a plant; and to the present time no satisfactory answer can be given as to how, or by what means, the plant first originated, and it is altogether different from those variations called "sports." Our own belief inclines strongly to the artificial mode through the blind bud, because, among other reasons, if it is really a cross-bred plant, it stands alone in its habits among the thousands that have been so produced. Both parents, very nearly in their original characters, are produced simultaneously with the mixture between them; and the seeds of the two parents, thus produced, will come true in their generation without any variation whatever.

These facts of themselves amount almost to a proof that the purple Laburnum is not a cross-bred plant, but had its origin in some way which we have not yet discovered. For these peculiarities are widely different from the effects of hybridising on plants, as far as we have yet discovered them. We have not yet arrived at any conclusion which would indicate a law or rule by which the reversion of a true cross-bred plant to one or either of its parents is provided for; and, after experimenting on this point for very many years, we cannot say that we ever forced a true cross to assume or re-produce either of its parents; and we believe the thing is an actual impossibility in the vegetable kingdom. It is true that many writers on this subject assert, that what they call a mule plant will in time revert to one of its parents; but no one who has dived much into the mysteries of hybridisation can countenance such a doctrine. All that our experiments on the subject have hitherto brought to light is our own total ignorance of any such law. We cannot even, with any degree of

confidence, foretell whether the offspring of any two plants will be fertile or sterile. The most dissimilar species in any genus, if they will cross at all, will be as likely to produce a fertile offspring as not, while two others, to all appearance the nearest in aspect and affinity, will be equally likely to have a sterile offspring. We make use of the words fertile and sterile to get rid of the confusion caused by the different meanings given to the term mule by different writers. Professor Lindley, in his "Theory of Horticulture," limits the use of the word mule to the offspring of two distinct species, whether fertile or not; while he makes "cross-breeding" to cover all the productions between distinct varieties; and if all writers had kept to these definitions we should be at no loss to comprehend their meaning; but Dr. Herbert, late Dean of Manchester, applied the terms hybrid, cross-bred, and mule, indiscriminately, and scouted the idea of placing any limits between species and permanent varieties; while other writers apply the word mule to any cross that is sterile, and writers on cross-breeding in the animal kingdom are just as far at sea in their opinions and terms. An actual impediment to a proper understanding of the language of hybridisation is thus placed in our path, which it would be useful to remove by discarding the word mule altogether, or at least from our popular literature.

On poor, light soil the colour of the flowers of the purple Laburnum is much affected by the nature of the previous season. After a hot, dry summer the flowers are almost all of that dingy colour peculiar to the first variation, for a "sport" it can hardly be called; and after a wet, cold summer the yellow flowers of the Laburnum are in excess. These variations are not so manifest when the tree is growing in rich moist soil till it attains its full size. If we could fathom the law which governs these variations, it might form a step towards the clearing of the mystery which hangs over the real origin of the plant.

Dr. Herbert suggested a very ingenious and probable hypothesis to account for the possible origin of this tree, which can easily be reconciled with the statement given by Mr. Adam, already referred to. Dr. Herbert believed that the shield of the purple *Cytinus* bud might be still alive after the bud itself was destroyed, and that this "live portion might unite with the Laburnum stock in the absence of a bud, and that the new wood, or cellular matter, which formed over the wound, between the shield and the stock, might produce an incipient bud, in the absence of a leading bud; and if the new bud was from an intermixed matter formed by the two plants, it could hardly fail of partaking of the two natures—that is, of the Laburnum stock and the purple *Cytinus* bud, which, in reality, it does; and the question is, how are we to proceed in order to obtain similar productions between other allied plants, for we must still adhere to the fact that species can only mix by pollen, or by this kind of union, when they are nearly related to each other. If it is possible to force a bud from two wounds in union with each other, and partaking of the natures

of two different species thus brought together, there can be no doubt about our being able to push this process farther than can be done by means of strange pollen in the usual way; and we think it can be done, for we perfectly concur in Dr. Herbert's view of the question. The well-known fact, that the two natures in the purple Laburnum aspire to separate themselves from the union, and assume their original character, cannot be accounted for on any other principle.

The means which Dr. Herbert suggested for effecting intermediate forms were to bud in the usual way, and, when the union took place to kill the bud, and to prevent the edges from uniting by lacerating the bark till a quantity of cellular matter was formed, from which a bud might be expected to issue, if the growth of the tree was checked in other parts. It is impossible, however, to succeed simply, by this process. The question involves the true origin of latent or incipient buds—a question that has never been satisfactorily answered by any one.

We asserted, many years since, in "The Gardeners' Magazine," that if you cut out the buds from a yearling shoot, leaving only the top bud to carry on the branch, the part of the branch thus disbudded was incapable of producing a latent bud afterwards by any kind of manipulation. This assertion was much disputed by some in private correspondence, when Dr. Herbert opened the question in reference to the origin of the purple Laburnum. A new set of experiments were, therefore, set on foot, to prove if Dr. Herbert's suggestion could or could not be effected; these experiments were begun in 1841, and carried on till the end of 1847. The most conclusive of these experiments we shall briefly relate, as the result is, probably, the only stumbling-block in the way of clearing up the mystery which hangs over the origin of the purple Laburnum.

Truncheons of the common Willow are proverbial for the ease with which they root and produce shoots from all parts of their surface when planted or stuck into the ground. The Willow was, therefore, fixed on as the most likely plant to produce incipient buds. In the spring of 1841, cuttings were made from the strongest Willow shoots that could be procured of the former year's growth. They were two feet long, and all the eyes or buds were carefully cut out, except the three top ones, and they were planted in the usual way in rich kitchen-garden soil. In 1843, when these had made two year's growth, some of them were cut below the growing branches, leaving only a bare stump. Now, we should naturally suppose that a Willow shoot of full three year's growth, and with abundance of roots, in good soil, would not refuse to shoot forth buds and twigs from all parts of the bark. Not so, however; for they died away inch by inch, roots and all, without ever offering to produce a single leaf. In 1844, another lot of the same batch were cut, and they died in the same way. After this, the bark of others was lacerated in all directions, to see if buds would issue from the new-formed wood over these wounds, but all to no purpose; and the last two were cut in the spring of

1847, when they were much stouter than a walking-stick, and they died also. Now, these Willow-shoots, although united to other Willows by inarching or budding, could hardly be capable of producing an union-bud—as we suppose the purple Cytisus and Laburnum to have done—seeing that they could not do so on their own roots; at any rate, the inference is rational enough, and can hardly be controverted. How then, it may be asked, can you suppose the shield of a bud of the purple Cytisus could be capable of taking a part with the Laburnum stock to produce the purple Laburnum? We answer—simply, by surmising that the said bud was taken from a two or three-year-old shoot of the purple Cytisus, which is not at all unlikely, seeing how thin the bark of a younger Cytisus shoot is. Another inference in favour of this view of the question is, that in France they have always been in the habit of leaving more of the young wood attached to the buds in their nursery operations than is generally done in England; and all of us know, that if a bud on a two or three-year-old shoot is destroyed, a quantity of incipient buds will immediately issue from the surrounding parts. The close-spurring of the Grape Vine is founded on a knowledge of this fact or principle. Therefore, we can see no reason why two shoots of mature age, to form incipient buds, may not be made to produce an union-bud, if the parts are at first properly arranged; and we think we can see why union-buds are not produced in our nurseries when the more natural bud fails, leaving the shield alive and in union with the stock. Our invariable practice is to take the buds from one-year-old shoots; and we have seen, by the experiment with the Willow, that if buds on one-year-old shoots are once destroyed, the shoots are not able to furnish others; besides, it may require more than a season or two to ripen the young wood over wounds sufficiently to produce buds; and leaving a portion of the young wood attached to the bud, may have something to do with the time required.

After weighing these considerations, we think the safest way to treat Dr. Herbert's hypothesis will be to inarch two shoots of closely-allied species, not less than three years old; to bring an eye of each shoot directly opposite in the inarched part, to prevent the wound healing over in the vicinity of the buds for the first season; and when the junction of the edges took the following year, to destroy the buds, or the shoots, which may have sprung from them, and to cut away some of the surface-bark from behind the buds, so that if incipient buds were formed at all, they must come from the sides next to the wounded parts; and if the irritation caused by keeping the wound from healing over has forced the young matter from the two shoots to run into each other, and finally to have formed one solid body, there can hardly be any doubt as to the issue of this experiment. Let it first be clearly ascertained that it is possible to produce an union-bud, and then there need be no limits to the application of the process.—D.

COVENT GARDEN.

FOLLOWING UP our remarks on the subject which has occupied our attention for the last two or three weeks, we come now to the consideration of the *Pear*. And here we would observe, that there is even greater room for improvement in the selection of its varieties than is necessary in the *Apple*. Even in the oldest orchards composed of *Apples* we find many first-rate established varieties; but it is not so as regards the *Pear*; and the reason is because it is only of late years that we have been made acquainted with that new race of varieties, for which the world is indebted to the genius of Dr. Van Mons. However much our ancestors may have been disposed to extend the cultivation of this as a winter fruit, they could not, for it had not been brought to the same degree of perfection as the *Apple*, and thus it is that our markets are so badly supplied during the winter months with such a succession of first-rate *Pears* as they are with *Apples*. All the *Pears* which are brought to market in any quantity are of the earlier kinds, and it would amount to an impossibility for any one to go to Covent-garden market during this and the following months and procure this fruit in the same quantity as they could two or three months ago. But still they can do so with the *Apple*, and what we want, is that they should do so with the same facility with the *Pear*. While *Apples* are now being sold, and will continue for the next four or five months to be sold at per bushel, we have *Pears* offered at per dozen, and per half sieve. Surely, then, this is a subject worth engaging the attention of those who have even a small portion of ground which may be occupied by such a crop.

In the following selection, we have chosen those which may be regarded as peculiarly rich in flavour, and such as would always command the best price in the markets. The late varieties, particularly, would amply remunerate the grower for any outlay he may incur. As before, we shall take them in the order of their ripening, and as the great object with cultivators is to have their produce either very early, or very late, we have studied the two extremes.

1. *Doyenné d'été*.—The earliest *Pear* which is worth cultivating, but it is very little known in this country. It is not of a large size, being considerably smaller than the *White Doyenné*, but for a *Pear* which is ripe in July, it is of good size and excellent flavour, being, in this latter respect not unlike the old *Jargonelle*.

2. *Citron des Carmes*.—This is an old-fashioned but excellent early summer *Pear*, and admirably adapted for orchard planting, the tree being a strong and vigorous grower, an early and abundant bearer, and succeeding well even in exposed situations. It ripens in the early part of August.

3. *Williams's Bon Chrétien*.—We have been doubtful whether or not we are doing right in recommending this, the most delightful of *Pears*, to the notice of our friends. It is a very uncertain bearer, and those who depend upon it for a crop will be subjected to very frequent disappointments. Still, however, as we have before re-

marked, we are only treating now on what may be called economical planting, and, therefore, we venture to include this excellent variety. Most people, now-a-days, know *Williams's Bon Chrétien*, but if there are any who do not, let them by all means procure a tree. The fruit ripens in August, and continues in use during the greater part of September.

4. *Beurré d'Amalis*.—This is a variety which for a few years past has been rather largely imported from the Continent, and has become so great a favourite in Covent-garden, that many of our largest growers have made considerable plantations of it. None know better than the London market-gardeners what to plant, and we can seldom be far wrong in treading closely at their heels. This is a splendid early autumn *Pear*, of very large size, handsome shape, and delicious flavour. It ripens in September.

5. *Dunmore*.—This is one of those delightful varieties raised by Mr. T. A. Knight. It is of large size, and of a particularly rich flavour. Every orchard and garden should have it. It ripens in September.

6. *Seckel*.—Of all the *Pears* we know at this season, we know of none to surpass or even to equal the little *Seckel*. It is originally from America, but it succeeds to perfection in this climate. It is remarkably rich in flavour, and when fully ripe seems as if charged with a powerfully aromatic sirupy juice. It ripens in October.

7. *Beurré de Capiaumont*.—This of late years has been very abundant in our markets, and has become deservedly popular. It is well adapted for orchard planting, being a most abundant bearer, and a beautiful, handsome, and excellent fruit. It ripens in October.

8. *Jersey Gratioli*.—This is a particularly fine *Pear*, and, if we are not mistaken, we spoke in very high terms of it in some of our early reports. By way of climax, we can only say, wherever there is a garden, there should this *Pear* be. It ripens in October.

9. *Mario Louise*.—There are none of the Belgian *Pears* which seem to have had such an extended cultivation as the *Mario Louise*. It is now as common in the markets, and on the fruit-stalls, as the old *Swan's Egg* used to be. It is a most delightful and valuable *Pear*. The tree is extremely hardy, and bears well. It ripens in October, and lasts till the end of November.

10. *Figue de Naples*.—This is a *Pear* of good size and of the finest quality. It is comparatively little known, but should always find a place in every collection. The flesh is very buttery, fine-grained, and melting, with a particularly rich, sugary, and aromatic flavour. The tree is a most abundant bearer. The fruit ripens in November.

11. *Passer Colmar*.—A most delicious *Pear*, and certainly one of the richest-flavoured we know when it is met with in perfection. Its flesh is very fine-grained, very juicy, buttery, melting, sugary and vinous, with a rich aromatic flavour. It ripens in November, and continues over December.

12. *Napoléon*.—Dr. Diet said of this *Pear*, that one may be said to drink, rather than eat it. Its flesh is tender, melting, and juicy, and very richly-flavoured. It

ripens in November, and continues in use during December.

We must now draw our observations to a close for this week, seeing our space for the market report is rapidly diminishing. But as we have not a great deal to communicate, there being few novelties presenting themselves, we must be content with merely making a general statement.

The prices of fruit continue firm, and rather on the rise. APPLES, for kitchen uses, are making as much as from 6s. to 7s. 6d., and 8s. per bushel. They consist chiefly of *Hawell Souring*, *Winter Pearmain*, *Alfriston*, and a great quantity of nondescript varieties. Among the choice varieties, we observed *Newtown Pippins*, *Ribstone*, *Golden Pearmain*, *Court of Wick*, and *Downton Pippins*. We do not observe many of the common kinds of PEARS; but there are plenty of the finer sorts, such as *No Plus Meuris*, *Nelis d'Hiver*, *Passe Colmar*, *Glout Morceau*, and *Beurée de Rance*. GRAPES are plentiful, the supply from abroad being rather large. These make from 1s. to 2s. per lb. Home-grown Grapes are also pretty plentiful, and make from 2s. 6d. to 5s., and 6s. per lb.

In Vegetables there is the usual abundant supply, and, generally speaking, a good demand. CABBAGES make from 6d. to 1s. per dozen. COLEWORTS, 1s. to 2s. per dozen bunches. CAULIFLOWERS of good quality, 1s. 6d. to 2s. 6d. per dozen. BRUSSELS SPROUTS, 1s. 6d. per half sieve. CARROTS, 2s. 6d. to 5s. per dozen bunches. TURNIPS, 1s. to 1s. 6d. per dozen bunches. ENDIVE, 1s. to 1s. 6d. per score. POTATOES maintain last week's prices, and are rather inclining upwards.

PLANTS AND FLOWERS.—The supply of EVERGREENS increases, and consists of *Laurustinus* full of bloom. *Chinese* and *Siberian Arbor Vita*, *Aucuba japonica*, *Tree Box*, *Red Cedars*, and *Common Laurels*. CUT FLOWERS are very plentiful, consisting of *Chrysanthemums*, *Scarlet Geraniums*, *Roses*, *Heliotropes*, *Chinese Primroses*, *Camellias*, *Cinerarias*, and *Fuchsias*.—H.

GOSSIP.

WE are informed, and we think upon good authority, that our observations relative to the *Great Metropolitan Poultry Show* are not justified by the facts. We lose no time, therefore, in stating what has just reached us, namely, that the Exhibition has been instituted by a few gentlemen, and that no gain is to be made of the refreshments. We have also heard that Mr. Gilbert, who was one of the prize takers at Great Yarmouth, is a chief promoter of this Exhibition, and his experience will insure that it is well managed. These explanations, however, do not touch the general principle we advocated, and still advocate, viz., that Poultry Shows should not be established for private gain; and, we think, Mr. Gilbert's own experience will induce him to join us in recommending the principal exhibitors to unite in signing a declaration, and publishing it in the public papers, that they will not exhibit at any place where their birds are required to be exhibited for more

than two days. We have received a very temperate letter on this subject, from "One of the Hitchin Committee," which we will reply to next week.

The continued wet weather throughout November, and down to the time when we are writing (Dec. 6th), has been too seriously felt to require in this column any general comment; but we refer to it for the purpose of stating facts demonstrative that the usual exclamations about never remembering such weather are more than usually well founded. At Chiswick, in the twenty-six years extending from 1826 to 1851, both inclusive, the average fall of rain during November has been 2.182 inches, whereas in the November just concluded 6.20 inches of rain fell, or but little less than treble the usual amount! The excess is very great, even if we take the November when most rain occurred in those twenty-six years—namely, that of 1842, for in that month no more than 4.47 inches fell.

Last month we ought to have expressed the genuine regret we felt at the loss science has sustained by the death of *Dr. Gideon Algernon Mantell*; and we take the more blame to ourselves for the omission, because with him has always been associated the memory of his brother, *Mr. Joshua Mantell*, our friend of early days, who cultivated his Dahlias with no small success, attended to the physical needs of his neighbours, and indulged his literary tastes by writing his *Essay on Floriculture*, and editing Baxter's *Agricultural Library*, whilst resident at Newick, near Lewes. He died in 1830, and now, on the 10th of November of the present year, his more distinguished brother has followed him.

"Dr. Mantell was a striking instance of a rise in life amidst great difficulties. He was born in the parish of St. John's sub Easter, at Lewes, where his father was a shoemaker in a small line of business, but of quick parts, and with a readiness of perception, and a strictness of integrity, which rendered him extremely useful to Mr. W. Cooper, the leader of the political party supporting the Whigs.

"Dr. Mantell has well described his father's virtues in some lines on a tablet erected to his memory in St. Michael's church in that town, reverently ending with the wish—

"Oh, vain would he, who in these humble lays
Attempts a father's and a good man's praise,
Follow the bright example thou hast given,
And humbly trace thy footsteps up to heaven."

"The family consisted of four sons and two daughters, and it was with great frugality that the sons acquired their education. Dr. Mantell received his first instruction at a dame school in the same lane as his father's house, and here he was so great a favourite that on the old lady's death she left him her little all. From her he went to the school of Mr. Button, in the Cliffe, where a sound and practical commercial education was given by a gentleman whose political sentiments were so accordant with those of Mr. Mantell the father, that he was known to be on the Government black list. The grammar-school at which Evelyn had been educated was not at that time available for a child of Mr. Mantell's political opinions, the twelve boys on the foundation being nominated entirely by the fees. On leaving Mr. Button's school, the kindness of Mr. Cooper came to the aid of the young man, who had attracted the notice of his father's friends by the diligence with which he devoted himself to his studies, and by his quickness and general desire to advance himself in knowledge; and the consequence was that he was apprenticed to Mr. James Moore, a surgeon and apothecary of the old school, an amiable and accomplished man, and a bon vivant. Here, again, Gideon Mantell so far conciliated the good opinion of his master, that, after he had "walked the hospitals,"

and, what was then a novelty in country practice, become a licentiate of Apothecaries' Hall, he was taken into partnership with his former master, and commenced a practice in his native town, which he carried on until the year 1835. In the course of that practice he was eminently successful, especially in cases of midwifery, on which branch, and especially on the use of the *ergot of rye*, he contributed several articles to *The Lancet*, in addition to many articles on other branches of medicine. His professional rival was Mr. Thomas Hodson, who was the great friend of Sir Astley Cooper and Mr. Abernethy, whose skill as an operating surgeon was equalled by few, even among the London practitioners, and whose practice in midwifery was as successful as that of Dr. Mantell. Indeed, so great was the skill of both, that it is recorded in Smith's *Philosophy of Health* (p. 140), that in fifteen years, out of 2,410 cases of parturition in the Lewes district at this time, there were only two deaths; and so fixed upon the attention of the poor was this success, that when Dr. Mantell was elected a member of the Linnean Society, the popular belief was that F.L.S. meant that he had been elected a fellow of the living society, and, as an old lady emphatically added, 'the society never had a better fellow.' It was in the exercise of his profession, also, and with the assistance of his accomplished brother, the late Joshua Mantell, then in his dispensary, that Mr. Mantell saved the life of a woman condemned to death for the murder of her husband by arsenic; Dr. Mantell having distinctly proved that the tests used, and which were said to have shown the presence of this mineral poison, had entirely and chemically failed. This led to his publication, in 1827, of his '*Observations on the Medical Evidence necessary to prove the presence of Arsenic in the Human Body in cases of supposed poisoning by that mineral. Illustrated with cases.*' By the exertion of great interest, and solicitation, in addition to those scientific efforts, the woman's pardon was procured, and she still lives in Burwash.

"At Mr. Button's school Dr. Mantell evinced a strong love for the study of natural history, and, upon commencing his practice at Lewes, he stole—for it could be called nothing else—some hours from the very arduous labours of a country profession to the investigation of the 'Organic remains of a former World,' firstly in the chalk, and next in the Tilgate formations, which were comparatively new ground. He was greatly encouraged in this work by Mr. Davies Gilbert, and he was largely assisted by the zeal and knowledge of Mr. Stewart Warren Lee, who was his most intimate friend and companion in all his early discoveries. He was also a keen follower of antiquity, and he opened many of the tumuli near the town. In this pursuit he was encouraged by the Rev. Mr. Douglas, the author of *Nania Britannica*, who was Vicar of Preston, near Brighton. Their results were published in the first volume of Horsfield's *History of Sussex*.

"For nine years he devoted himself to the prosecution of his researches into the chalk formation, and in the foundation of the collection now in the British Museum. In May, 1822, he published, by subscription, the result of his labours in the quarto volume, '*The Fossils of the South Downs, or Illustrations of the Geology of Sussex*,' the engravings being executed by his wife, to whom he had been married after an attachment formed during his unremitting professional attention to her father, and whose artistic skill would have done credit to a professional engraver. The work was dedicated to a Mr. Davies Gilbert, through whose recommendation Mr. Mantell was elected a F.R.S. in the year 1825.

"In 1824 he contributed to Horsfield's *History of Lewes* 'The Natural History of the District;' and in December, 1826, he published his '*Illustrations of the Geology of Sussex*,' with figures and descriptions of the fossils of Tilgate Forest, among which he had found the *Iguanodon*, the *Megalosaurus*, the *Platysaurus*, &c., and had made discoveries which will never be dissociated from his name. Indeed it is as a working geologist, as a discoverer, and as a collector, as a man who, in the infancy of the science of geology, placed before the world the means by which others could write a thesis or found a system, that Dr. Mantell's merits were best displayed, and will be honestly acknowledged.

"He received from the Geological Society in 1835 the Wollaston medal and fund, in consideration of his discoveries in fossil comparative anatomy; and in 1849 the Royal Society conferred upon him the royal medal for his memoir on the *Iguanodon* which was printed in the *Philosophical Transactions*.

"Dr. Mantell quitted Lewes in 1835. Among the patrons of merit which Sussex then possessed was the Earl of Egremont. He was a frequent visitor at Dr. Mantell's museum at Lewes, and mainly by his advice, and with a handsome donation of £1000, the residence of Dr. Mantell, together with his museum, was removed in 1835 to Brighton. The same amount of professional success, however, did not follow him from his native town, and, the Earl having died in 1838, and an attempt to keep the treasures in Sussex having failed, Dr. Mantell disposed of his collection to the British Museum for the sum of £5000, and himself removed in 1839 to practise at Clapham; whence he came to Cheshersquare.

"His professional practice was not increased by these removals, and latterly he had devoted himself more than ever to literature. We append the titles of some of his principal works, referring for others to the *Bibliographia Zoologica et Geologica* of the Ray Society, where the names of sixty-seven books and essays are given.

"*The Wonders of Geology*. 1838. In two volumes 8vo. This work consists of a series of lectures on the principles and facts of the science. It has gone through six editions, and has been translated into German.

"*The Geology of the South-east of England*. 1838. 8vo. "The Medals of Creation; or, First Lessons in the Study of Organic Remains. 1844. Two volumes 8vo. This also has been translated into German.

"*Thoughts on a Pebble; or, a First Lesson in Geology*. Seven editions.

"*Thoughts on Animalcules; or, a Glimpse of the Invisible World revealed by a Microscope*. 1846.

"*A Day's Ramble in and about the ancient Town of Lewes*. 1846. 12mo.

"*A Geological Excursion round the Isle of Wight, and along the adjacent Coast of Dorsetshire*. 8vo.

"*Petrefactions and their Teaching*. 8vo. This was one of the last of the author's works, and was intended as an introduction to the organic remains in the British Museum.

"Dr. Mantell received a pension from the Crown during the last year, and had scarcely lived to derive any benefit from it. His doctor's degree was acquired from an American university. For the last few years he had suffered from a spinal affection, caused by accident, which prevented him from following his pursuits with his former activity.

"As a lecturer, as well as author, Dr. Mantell was eminently successful. His style was fluent, and he possessed the art of attracting his audience by an exhaustless catalogue of wonders. It has even been said that he yielded with reluctance to the revelation of a truth when it dispossessed him of a pretty illustration. It is certain that he depended much upon the arts of popularity, and he usually obtained all the applause for which he aimed.

"The Council of the Clapham Athenæum have publicly recorded their testimony of Dr. Mantell's last scientific efforts in that locality. They remark that 'For a long series of years the lectures delivered by Dr. Mantell in this place have formed one of the chief ornaments and attractions of successive sessions. No one who has enjoyed the advantage of hearing him can ever forget the singular ability, the felicitous illustrations, and the energetic eloquence which characterized all his discourses. He was one of the earliest and most zealous members of this Institution, and the originator of that series of gratuitous lectures on scientific subjects which have been so advantageous and creditable to the parish of Clapham. The members of the Clapham Athenæum will not be unmindful that Dr. Mantell's services were always prompted by an earnest desire to promote intellectual enjoyment and good-will throughout the neighbourhood; nor will they forget that these admirable lectures were generally delivered by him at the cost of much self-denial, under the pressure of severe bodily pain, and that the last public effort of this gifted man was made in the presence of the Society only a few hours before his lamented decease.'—*Gentleman's Magazine*.

The following is a list of the *Horticultural and Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

HORTICULTURAL SHOWS.

SOUTH LONDON (ROYAL), Dec. 16.

POULTRY SHOWS.

- BIRMINGHAM AND MIDLAND COUNTIES, 14th, 15th, 16th, and 17th December.
- CORNWALL (PENZANCE), January 10th, and 11th. (Secs. Rev. W. W. Wingfield, Guival Vicarage, and E. H. Rodd, Esq.)
- HONITON, January 12th. (Sec. H. K. Venn.)

PINE-CULTURE: THE HAMILTONIAN SYSTEM.

(Concluded from page 160).

We have now the remaining heads—"Piping, Root-culture, Ripening, Soil, Structures, Suckers, Syringing, Temperature, Watering, Ventilation," and then a few wind-up remarks; and we cry mercy of one portion of our readers, to whom this apparent repetition, or rather "summing-up" may be tedious.

PIPING.—For disposition of this in Hamilton's house, we may refer the reader to page 4 of *THE COTTAGE GARDENER*; and as a "Querist" has desired to know the calibre of pipes in that house, we beg to say that they are of five-inch bore, although Mr. H. observes they *might* be of four-inch. It will be seen, that there are two five-inch pipes in each bed for bottom-heat, viz., a flow and return; and that they are made to proceed to, and return from, an iron reservoir or tank at the farthest end; this saves the expense of elbow joints, we suppose, and is more simple. Two five-inch pipes also proceed along the south, and two along the north, turning round the end opposite the boiler; there also are a flow and return on each side, so that the house is fairly surrounded by piping to warm the air.

Now, as in hot weather the air-piping is not required on duty, Mr. H. says, on this head—"The pipes which heat the air of the house can be plugged up at any time, when only bottom-heat is wanted; this is a mode of my own, and simpler and better than valves." Our advice is, where you have any doubts about amount of piping, either call in an old practitioner, a man who is experienced in Pines as well as pipes, or else employ his fee in laying down a little of what you conceive to be piping which might be dispensed with; anything, in fact, but under-heating.

ROOT-CULTURE.—But little is requisite—still some is desirable. Mr. H. says in his book, page 65—"In conclusion I may state, that only when the roots are to be seen in the axils of the leaves, the operation of earthing-up is required; and it is better to earth-up *among* the leaves, than to destroy them before they have performed their destined offices for the plant." It will be seen, also, that in pot-culture, when an attempt is made to cultivate the old stool without planting it out, he prefers stem-culture, the old roots perfectly undisturbed, to repotting. He says—"I then commence earthing-up with the prepared compost, pressing it a little round the trunk of the plant, and allowing it to slope down to the edge of the pot. I am quite convinced of the superiority of earthing-up over that of transplanting into larger pots after the fruit has been cut. I have invariably found the plants to be from two to four months longer in fruiting, and the fruit also to be much inferior in size." We have here, as in a few other places, slightly paraphrased our author, but feel assured of pardon, the principles not being perverted, and, moreover, time gained. To conclude this heading, we may

repeat Mr. H.'s answer to our query, No. 10. *Question.*—How long after planting before they require culture, and what kind? *Answer.*—"All kinds would be better by a little soil on the top once a year." By this our readers may see that a little up-stem culture, if not absolutely necessary, is particularly desirable; as soon as our beginners perceive, by observation, the natural habits of the Pine, they will be able to modify their practice to meet, not oppose, its own native bent.

RECIPES.—Mr. H., at page 58, very properly remarks, on insects—"I have known many persons, and have frequently heard of others, who, after having tried every method they have known, have at last been obliged to destroy their whole stock of plants in order to get rid of them;" that is to say, the insects which infest the Pine. Happily for beginners in these days, the rule has become the exception, and foul plants are so little known or expected, that even the wary may occasionally be caught napping in making purchases. No man in his senses would think of buying a stock infested with insects of any kind. If, however, such a case should occur, Mr. H. offers a well-tested recipe, which may be found at page 59 of his interesting work. This is for the cotton bug and white scale, two of the Pine's greatest enemies, and Mr. H. affirms, that "with one application every insect was destroyed without doing the slightest injury to the plants." Many recipes are to be heard of for destroying such pests, but we would fain for the present have the Hamiltonian system fairly represented; and, moreover, we have not space, and perhaps our readers have not patience, for digression.

RIPENING.—Little to be observed here. Mr. H., like all other good cultivators, prefers a somewhat drier air, and a previous abstraction of root-moisture, in order to obtain a high degree of flavour.

SOIL.—Let the reader refer to "Composts" in the present papers: this will save repetition.

STRUCTURES.—More will be urged another day as to what modifications of Mr. H.'s plan might be adopted; for the present, we will just observe, that Mr. H. has so far fallen in with views we have pointed out to him as to the span-roof system, as to admit the following:—"I am of Your opinion, that span-roofed houses would be better north and south." Now, this has long been with us a favourite opinion; but as misleading an anxious public is not a light matter, we have, during the last three or four years, sought out opportunities of obtaining the opinions of those we deem first-rate practical men on this subject, believing that we were all held in a sort of thrall in the matter. We may here just point to our old and esteemed friend, Mr. Appleby, who has more than once (during practical chat) expressed himself as decidedly of this opinion; and, verily, the ridge and furrow houses all over the country would seem to bear testimony to a desire to seek some relief from the lean-to method; and not only that, but a sort of desire for a morning and evening slope to houses, in preference to a burning mid-day sun, with all the extras of shading, &c.

SUCKERS.—We have before given a detail of the culture of these, with the technical names by which they are known through subsequent culture. It may here be observed, that Mr. H., in strong terms, points to the immense progress they make attached to the old stool, as compared with those deprived of the assistance of the parent plant, by being entirely detached.

SYRINGING.—On this Mr. H. lays much stress. He says, page 42—"My motive for supplying the plant with a sufficiency of water, by syringing over the leaves, is twofold. First, I believe the leaves of the Pine to be very porous, and, therefore, capable of absorbing a great quantity of its food by that process. Thus, I syringe with tepid water. Secondly. By frequently syringing the plants, the surrounding atmosphere is kept in a humid state, the soil is constantly moist on the surface

of the pot, which causes a constant supply of food to descend to the roots from the fresh compost, and although limited, it will prove sufficient for their supply till the fruit is perfected; whereas, by this usual practice of supplying the roots copiously with water, the nutritious fluids are entirely washed out of the pot, &c." Thus it will be seen how it is that Mr. H. so very seldom waters at the root. The frequency of the syringings must in part depend on the weather, and the time of year; in summer, morning and evening; but in winter some caution is necessary—perhaps about three or four times a week. One thing must here be observed. Most good cultivators judge by the axils of the leaves, and make a point not to repeat the syringing until the axils of the leaves are nearly dry. This points at once to the necessity for a lively temperature, as well as motion in the air by ventilation.

TEMPERATURE.—Although we have briefly observed on air-heat before, we must add a little more under this head. Mr. H. says—"The temperature required for succession plants in the winter, is from 55° to 60° at night, and 65° to 75° during the day. In autumn, winter, and spring, if fruit are to be swelled, they will require 60° to 70° at night, and 70° to 80° during the day. In the summer, the maximum, under the effect of strong sunshine, may rise to 90°, and may be allowed to drop as low as 70° by the morning. In very bright sunny weather, the plants in fruit had better be shaded than admit too much air at any time of the day. In order to swell this fruit to a large size no air ought to be given until the thermometer reaches 80° to 85°, which will generally be by nine or half-past in the morning. To keep it down to this, give it the benefit of air until half-past ten, then close the house,—shade the plants, and water them over the leaves; then let them remain until half-past two or three in the afternoon; then unshade, and let them have all the benefit of light and sun, giving a little air, which must remain until half-past four, then close the house, and syringe again over the leaves of the plants, which will keep them moist during the whole of the night."

WATERING.—This is so seldom requisite under the Hamiltonian system that we merely refer to it in its order to keep the eye fixed on the fact. Of course, we mean watering at root by the ordinary water-pot.

VENTILATION.—Although Mr. H. seems to care less about this than most cultivators, it is his diurnal practice, more or less. Nevertheless, we do think that although for profit his plan is superior to any, yet those who aim at the very highest amount of flavour, and a small crown, would do well to go much beyond him in ventilating points. Of the close treatment, it may be safely affirmed, that it has a tendency to produce big crowns, and these certainly detract from the appearance of the fruit on the table. Mr. H. advocates shading occasionally. Now, the question is, whether east and west roofs would not obviate the necessity of this, and thereby save expense and trouble? We recommend those about to enter on Pine-culture to give this a thought, and, in doing so, to bear in mind Sir J. Paxton's ridge-and-furrow roofs. We beg again to quote our good friend Hamilton, in support of this—"I am of your opinion, that span-roofed houses ought to be built with the ends north and south; if they are not, there must be a good deal of glazing, otherwise their leaves will be completely drained of their moisture. I speak from experience; they will have holes burned in them occasionally." It has been generally understood that the Pine requires a winter's rest, or, in other words, should be compelled to cease growing for some eight or ten weeks by a low temperature and a dry atmosphere. Mr. H., like most of the good people in the tall-chimney districts, is all for quick return for capital; and although he does not deny that the elabo-

rations at that period are less complete, yet he will not hear of loss of time, believing it—yea, knowing it—possible, by good management, to still push on (although by more tardy steps) the plants to the desired end. We here think, with all deference, that he carries the idea a little too far; but our readers will judge for themselves.

And now for a correction of errors into which we may have fallen. At page 24, an inadvertency occurs which will surely be pardoned, when it is considered that we have had to wade our way through, at least, half-a-score letters, and, in addition, to watch every idea set forth in Mr. H.'s book. One misleading point, which is a kind of ambiguity, stands thus—"The flow and return in each bed are totally unconnected with each other, or with the flow and return round the exterior, &c., &c." Now, what we really meant to express was this—that each bed had a flow and return of its own to provide the bottom or root warmth; and that each side of the house, north and south, was also, in like manner, fitted up for atmospheric heat. It was also stated, at the same page, that "there must be a great preponderance of heat at the boiler end;" this, however, it appears is not the case. We wrote to Mr. H. once more, after his repeated kindnesses, to invite criticisms as to mistakes, and he has at once set the matter right; for it would appear by his description, that his house is entirely surrounded by piping for the atmosphere, and to use his own words, "there is not half-a-degree difference between the ends." Thus: the boiler, we will say A, has a flow and return into the iron pan (which Mr. H. calls his cesspool), B. From this "cesspool," or, rather, iron-pan (which forms the medium of communication between the boiler and the pipes), proceeds along the south cavity, or alley, a flow, and, of course, return-pipe to and from a similar iron-pan, C, in the south-west corner; be it understood, that in this case the boiler is at the east end of the house. In like manner, a flow and return proceeds along the north cavity, or alley, to the same iron-pan; but this piping has to traverse the west end, of course, before it can reach the iron-pan, D. This will, we hope, render all plain; if not, we will try again.

To conclude, let us, on our own part, and also that of our readers, heartily thank Mr. H. for his very great civility in furnishing information. We owe it to a long acquaintance, doubtless; but, knowing the man well, there was a secret assurance that we might presume on his help. To be sure, it would have been much easier to have skimmed his book, and to have sketched an "article" out of it, which, indeed, could not have erred much; it appeared better, however, to have, if not new matter, at least a confirmation of the old, from the fountain head, and thus a good feeling of long standing enabled us to obtain. But those who would fain know the minutiae of Pine-growing by his system, must lay by a few pence and buy his little book. An expositor, after all, is not an author; the public lie at the mercy of his views. In that original work, though small, though dressed in rude attire, and, we may add, not enriched by a high style of composition, may be found by the considerate a host of ideas, or the germs of them, carrying every mark of originality, and of a mind determined to test every previous practice by nature's own standard. We need scarcely observe, that in dissipating the idea of a chamber being a necessary adjunct to Pine-culture, he has done the gardening world no small service, for these chambers are expensive things. We do not say that he has been the first to get rid of this superfluity; he may, or may not be so; but if he is not, who is the man?

We have to acknowledge assistance from Mr. D. Davis, also, of Heaton-Lane Foundry, Stockport, who has been in the habit of fitting up Pineries on Hamil-

ton's plan. He has, it appears, a foundry of his own, and casts all his own pipes, guaranteeing any desirable amount of heat during the most severe weather. Mr. H. tells us, that he is highly qualified to give practical instructions in the way of erecting stoves, having had much experience this way. We have no personal knowledge of Mr. Davis, but Mr. H. points to him as one peculiarly eligible to those within his reach. Another hint:—Thomson, Esq., Greenmount Hall, Harpurbury, near Manchester, has some true Jamaica Pine plants to dispose of; or those that are by some called Montserrat, which are, at all events, the best kind for winter, and by no means the worst in summer; added to which they are not, by any means, second as to cultivation on the Hamiltonian system. R. ERRINGTON.

BULBS

(Continued from page 162.)

ANTHOLYZA.—The species of *Anizanthus* are now referred to *Antholyza* by common consent, but there is no feature by which they can be distinguished from *Gladiolus*, except the fore-shortening of the front or lower petals, that part being, as the botanist says, *abbreviated*. *Antholyza* being almost united to *Gladiolus*, through this section having the lip abbreviated, it is immaterial whether we join Sweet's *Anizantha* to *Gladiolus*—their true position—or to *Antholyza*, whose flowers are more *Anizanthus*-like than like *Gladiolus* flowers. I never heard if these two forms of *Antholyza*, or even the *Anizanthus*, could be crossed with some of the nearest *Gladioli*, such as *Watsonias tristis*, and *concolor*.

The whole order of Irids, to which these plants belong, stands much in want of a thorough revision. Meantime, gardeners and amateurs might greatly assist in this reformation by instituting experiments, perhaps not so much for the purpose of increasing popular varieties, as to determine how far they will stand the test with the pollen. Try if *Antholyza Ethiopica*, *cunonia*, or *splendens*, will cross with any wild *Gladiolus*, or with any cross *Gladiolus*, that may have the flowers less regular than usual. Is it possible to cross *Antholyza* with *Watsonia*? Should these experiments fail, try them differently; let the species of *Antholyza* be first crossed with each other; *Watsonia* the same; and then see whether the crosses, or any of them, will unite the two genera, or fall back to *Gladiolus* through some one of its numerous crosses.

Antholyza Ethiopica, *cunonia*, and *splendens*, are the best three in this genus for the flower border, and they hardly ever refuse to grow in any kind of soil that is not too stiff. In pure, fresh peat they will luxuriate and produce abundance of fresh offset bulbs; the same in a deep, light, rich border of sandy loam and very rotten leaf mould; and they are more accommodating than the *Ixias*, for they may be planted any time from the end of September to the end of April. At the Cape, they would seem to be stifled in the hard brown coats and remains of the old bulbs, but that is the best condition for them to drain and throw off the wet from them, and with such natural guards they may remain for many years in a border without being disturbed. I have seen splendid examples of them in pots, in very rich, light soil, but not so good as I have seen them in an open border, being planted six inches deep, and supplied largely with water from the time the flower-stalks appeared.

Antholyza praelia.—This is the next best after the three scarlet ones, and, like them, it grows from two to three feet high. The flowers are orange with a tinge of red.

Antholyza montana.—This is comparatively a small plant for an *Antholyza*, and is much more like one of those curious species of *Gladiolus* one often sees from

the Cape; and when we remember that it was through *Gladiolus tristis*, the oddest thing you ever saw, that Dr. Herbert laid the foundation of the beautiful races of them which we now so much admire, dare we assert what is "looming in the future" of this *montana*?

Antholyza quadrangularis is another anomaly in its way—indeed, it would take a clever botanist to say what it is; and after that a few touches of the pollen might prove that it was no such thing. The flowers are narrower and less shortened in front than those of *cunonia* or *splendens*, and the colour is that faintish yellow which few admire; but the plant is as strong and as easily managed as *cunonia*, or any of the more fashionable *Gladioli*.

BABIANA.—A common observer could not tell a *Babiana* from a *Sparaxis*, nor some of the latter from *Ixias*, and some species of *Ixia* run so close to *Tritonia* that, without knowing the "private mark," no man could know the one from the other. The colour, size, or texture of the seeds is no criterion of generic differences among these *Ixia*-like plants. The insertion of the stamens, here or there, in the flower would carry the same weight with a pollen master. Versatile anthers, smooth or jagged spathes, and other marks of distinction, have been useful enough hitherto as "private marks" for telling present arrangement; but sooner or later the whole must be laid aside, and a reconstruction of *Ixias* be made; therefore, cross all the species as if they were in one genus already,—if they do not mix, that is no sign of a natural difference, and if they do, it will prove useful in two ways—an improvement in the garden varieties, and a check on the labours of the systematist. All the *Babianas* are quite dwarf plants, and more fitted for pot-culture than out-of-doors. They prefer sandy peat when confined in pots, but out in a border they will do without a particle of peat, if the soil is very light. Four inches is deep enough for the bulbs, and if a handful of clean sand is put round half-a-dozen of the little bulbs in a patch, they may remain undisturbed for several years. Whether in pots or in a border, they ought to be planted early in October, and not to receive more than the first watering at potting time until the leaves are well up above the ground; and there is not a plant in the whole order (Irids), that likes to be without a free admission of air during every period of its growth. There is about a score of species in this genus, but their culture being so uniform, I shall not waste space with separate accounts of them. Under *Sparaxis* I shall show a good way of growing a collection of such bulbs in the open air.

BARNARDIA SCILLOIDES.—This is a small, half-hardy bulb from China, with purplish small flowers. I think it was introduced by the Horticultural Society; at any rate, I recollect it as among the earliest plants that Dr. Lindley named on his own account. A figure of it first appeared in the Botanical Register in December, just twenty-six years ago, when I was at Altyre, and the late Lady Gordon Cumming sent for it at once. It did not seem to like pot-culture, and I have not seen or heard much about it these twenty years; but if it is in cultivation it is well worth having, as few bulbs of its small size flower at the same time—the height of summer. A light, sandy soil will suit it best; and if grown in a pot, the bulb ought to be freed from the soil as soon as it rests, and be kept in sand in a dry place; it might be so kept all the winter, and planted early in February.

BEATONIA ATRATA, curvata, and purpurea.—These are small Mexican bulbs, that are very nearly hardy. *Purpurea*, on which the genus was founded by Dr. Herbert, was discovered in Mexico, by Galeotti, growing along with the Jacobaea Lily, *Sprekelia formosissima*. All three refuse to grow in peat, and prefer a good, loamy soil, made light with sand; they grow and bloom during

the summer, and require to be kept dry from October till March. I believe the whole stock of them in the country were in Dr. Herbert's collection when it was dispersed, and that they are now very scarce. Naturally they are intermediate between *Tigridia* and *Cypella*, among the Irids. There is another fine *Tigridia*-looking bulb, growing on the top of the mountain San Felipe, in Oaxaca, in Mexico, which is not yet introduced, I believe; but it would repay a diligent search, and the range is not far out of the route from Vera Cruz to the city of Mexico.

BESSEBA ELEGANS, *fistulosa*, and *Herbertii*.—These are also small Mexican bulbs, very pretty, and all but hardy. *Fistulosum* was figured in the Botanical Register, some twenty years since, from a plant flowered by Dr. Herbert, who called the genus *Pharium*; but it was pre-occupied by Schultes, and *Pharium* is now cancelled. *Herbertii* is among the newest of our Mexican bulbs. *Elegans* is the best of the three; the flowers are drooping from the top of the stalk, of a rich orange-crimson, and red stamens. They require exactly the same treatment as the *Beatoniis*; but their affinity is with the *Barnardia* mentioned above, being Lilyworts, of the Squill section.

BLANDFORDIA.—If *Anthericum*s were as gay and varied as *Alstr merias*, *Blandfordias*, and *Bomarea*s, they would be equally entitled to a place in our series, for, properly speaking, none of them are bulbs, or corms either; but strangers and all who care little about looking under the surface of things, need not mind the roots when the flowers are gay, and look as if they were produced from real bulbs. *Blandfordias*, with all the aspect of bulbs, are, in reality, only herbaceous plants; their constitution is much stronger and harder than their outward looks would indicate; indeed, no one who can flower a good Hyacinth three seasons running, need fear trying any of the *Blandfordias* without having more convenience for pot-bulbs than would serve to grow Hyacinths well. *Blandfordias* are from Australia; they belong to the order of Lilies, and to the section of Day Lilies in that order; and the nearest plants to them in that section are the *Tritomas*, from the Cape of Good Hope.

Almost all who like to grow the most showy herbaceous plants know *Tritoma varia* and *media*. A young plant of *Tritoma media* would look much like an old-established plant of *Blandfordia*; orange, crimson, and scarlet, mix in the flowers of both; both are increased from side suckers taken off in the spring, and some of the *Blandfordias* seed freely, but *Tritomas* do not seed.

I am not aware of any family of plants that have been yet tried by the cross-breeder, from which better plants for the mixed choice border could be expected than this and *Tritoma*; and, notwithstanding the difference in their flowers, I can see nothing in them to debar their union: get a cross between the old *Blandfordia nobilis* and *Tritoma varia*, and if it comes intermediate between the two parents, raising *nobilis* higher in the world, and reducing *varia* to the dimensions of an ordinary border-flower, where, among all the herbaceous plants, can such another gem be looked for? There is one thing, and one only, which is proved, by cross-breeding, and that is, that if the pollen of a hardy plant, like *Tritoma varia*, is dusted on a less hardy one, as *Blandfordia*, the offspring would take after the harder parent in constitution, therefore *Tritoma* should be the pollen parent. I shall never believe that these may not be crossed together, till all we know of the means of effecting a difficult cross are exhausted.

Blandfordia nobilis.—It was on this species that the genus was founded in 1808. A strong plant of it will throw up a central flower-scape two feet high, bearing a cluster of drooping flowers on the top, the colour being a rich orange-red. It seeds freely, and the seeds

ought to be sown the same day they are gathered; but they will keep for months. Good yellow loam, two-parts, and one-part of turfy-peat, with a little leaf mould and sand, is the right compost for full-grown plants; for younger stages, reverse the proportions of loam and peat, and leave out the leaf mould. But to see this plant in perfection, it ought to be grown out in the open air, in a deep rich border, three summers running, and to be taken up in October, and kept half-dry through the winter, or, what would be far better, to be left in the border, keeping frost and heavy rains from it in winter. All the other species have much of the family appearance; and after you know one of them, you would find little difficulty in recognising any of the genus—orange, crimson, and flame-colour, being the prevailing colours. There is a new and tall species that was little known at the time the genus was printed for THE COTTAGE GARDENERS' DICTIONARY. It was introduced by Mr. Low, of Clapton, with whom I saw it last October, and others of the same genus; the name is *Flamea*, or flame-colour, and they say it grows from three to four feet high, and is easily kept and increased. I linger for opportunity to try a crossing in this beautiful genus.

D. BEATON.

(To be continued.)

ALLOTMENTS.

WHEN duly attending to the higher matters connected with gardening and rural affairs, the interest of the labouring cottager should not be lost sight of. His condition and prospects have secured no little attention from the philanthropist. If schemes failed, the result was not the consequence of a lack of kind wishes. To improve any part of the masses of society there must be, combined with willingness, a thorough acquaintance with the condition, the intelligence, the modes of acting and thinking, of the parties to be benefited; without this the kindest wishes may not unfrequently enhance the very ills they are intended to lessen. Charity itself may be, and often has been, so administered as to militate against self-respect and independence of character. Without a trace of presumption, I have often thought that a committee of moderately intelligent gardeners, with their hearts in the right place, would be able to point out a better redress for many social ills than a more learned conclave of parlour-bred philanthropists, and just because most of us, though at times we take a pen between our horny fingers, have companioned and roughed it with the humblest classes of society in various parts of the country.

With the double flux that is now going on—the influx of gold, and the outflux of emigration—the question of allotments is not likely to occupy the prominent position it did several years ago, when, from several causes, there was a superabundance of labour. Still, as in rural districts good gardens exercise a great influence upon social comfort and moral worth, and as in suburban districts there will be joined, generally, to these advantages, the pleasures of change of scene and of occupation; while in both cases, as many a happy wife could tell, the patch of ground became one of the chief antagonists to the charms of the drink shop—our earnest hope is that these allotments may be vastly increased. Still, when a thing is so good in itself, we ought the more carefully to prevent its being turned into an evil; and having thought and observed much on the working of the system, years ago, I have taken the liberty of alluding to the matter here, to express how thoroughly I agree in the ideas expressed by Mr. Errington in the commencement of his article, page 148, and to hope that those opulent and benevolent individuals who nobly

contemplate extending the allotment system will previously think these matters over. Wishing, however, humbly to support Mr. E.'s opinion, I hope I shall be excused for stating the following deductions:—

1. It is always an advantage that the ground be contiguous to the cottage; next, that it be in a field as near as possible; and if at some distance, that it be approached by a good road.

2. The rent charged, after making allowance for any extras, should be similar to what the farmer pays for the adjoining land.

3. Whatever terms be agreed upon; whatever the conditions as respects regularity of payment; proper and industrious cultivation, and propriety of conduct, necessary to the holding of the allotment; no considerations of previous character, unless there was something very flagrant, should operate as a barrier to obtaining one; for to allow of such a barrier would be tantamount to denying our faith in gardening as an improving influence.

4. It is to the advantage of every labourer to be in regular, constant employment. "The allotment or garden should be no decoy from his regular occupation." The extent of his holding should be regulated by what he and his family can accomplish during their own time. Few employers would refuse a man a day at any particular emergency, but this must not be calculated upon as a matter of course. I have met with few who will pay a man regularly and cheerfully in bad weather, who bolts off to his own ground without leave or warning when it is fine.

5. When a surplus of labour abounds in a district, the dividing the land into largish allotments, sufficient to give work for several weeks or months, has been considered a remedy. I am convinced it is merely a temporary palliative. It is based on the supposition, that when not working for the farmer the allotment holder can labour for himself; but unfortunately the farmer and the allotment want that holder's chief services at the same time. Need I speak of the tendency to grumbling, idleness, squatting, and the mutual heart-burnings thus produced?

6. If in rural districts such a superabundance of labour should again exist—as we have painfully witnessed in times gone by—two views as respects allotments present themselves. 1st. If it be conceded that the labourer is remunerated for his work on the allotment—and this, I believe, is generally granted—would not the same labour be worth somewhere about as much to the tenant or the landlord? and if so, might not the labourer be freed from a nondescript position, always an unpleasant one to be in? But, 2ndly. If capital is deficient to pay the labour seeking employment; and yet the superior cultivation of the land would remunerate the labour so employed, why should those able to support themselves for a short time from previous savings, and are willing to labour, not have an allotment that would give them work, not for a few weeks, but during the greater part of the year; a system which in such circumstances would ease the labour market, and prove a barrier to idleness and pauperism? I am aware that such an allottee would imperceptibly become a market-gardener, or a small farmer, thus opening up a great social question. I am, however, merely treating of allotments of land; and my object in addressing these words, not to the enemies of allotments, but to their advocates, and as such, the friends of the working classes, is to incite them calmly to investigate, whether between such a small farming allotment, and one that can be cultivated in the over-time of the family, there be, except in special and particular exceptions, any middle course, which, if continuously followed, will benefit, ultimately, either the individual or the community.

7. Some of these special exceptions may consist of jobbers, mechanics, and artisans, who do not expect constant employment at their vocations. The mere change of employment is to them a great advantage. Even here, however, some judgment must be exercised. I have seen men in such circumstances, attending thoroughly to their business, and yet producing specimens of cultivation that few blue aprons could equal. I have seen others trifling on their allotment, neglecting alike their business, and the interests of their family. A smaller or a much larger allotment would to them have been an advantage, just because many men, when much employed on the ground, lose all relish for other work. I have witnessed scores of cases of industrious tradesmen and mechanics, in villages, not more than half employed, their work having gradually lessened through no fault of their own, and yet, from a strong development of the bump of locality, they cannot think of going beyond the sound of the church bell to which they listened in better days. A large allotment to such men would be alike a source of pleasure, comfort, and prosperity.

R. FISH.

GESNERA ZEBRINA.

THE roots of this, after the tops decay, must be kept dry and free from frost. I have often kept them in the pots in which they bloomed, turned over on their sides in the warm end of a common airy greenhouse. A great lover of these plants has directed my attention to a passing notice of their culture lately, for greenhouse decoration in early autumn, by my friend Mr. Beaton, and has put a couple of queries respecting them, which may be generally interesting. 1st. Have you yourself found a similar system to answer? Yes, perfectly so. To obtain large masses of bloom early, either for vases or large pots, it is best to grow single tubers in small pots. Whether checked by being moved to a more cool, airy position, or not, they will show bloom much earlier than when supplied with more feeding room, and may then be turned out of their pots and be packed in the larger vessel. I have thus had fine masses in the beginning of August in a glass-covered veranda. 2nd. Is there not a discrepancy between Mr. Beaton's very easy method, and the great care detailed by you as necessary some two years ago? I do not think there is. Mr. B. glanced at a system, without going into the minutiae. These little matters, I consider as important as ever, just because fine foliage, with a deep shade of purple, is more admired than even the flower spikes. Hence, care will be saved, when these plants can be started and grown in a hot-house, or forcing-house, where they can either have a slight shade, or be placed from two to three feet from the glass. A frame or pit will enable admirers to have these plants early, though assisted only with fermenting material; but my experience would direct attention to the following points: First, The heating material must be sweet. Second, Even then no steam or vapour should collect around the foliage previously to the sun shining on them. Third, Air should therefore be given night and day. Fourth, The plants should stand at a distance from the glass, or be slightly shaded from bright sunshine. Fifth, The drier the leaves are kept the better. Neglect in these matters will cause you to run the risk of pale, bleached, curled, and blotched foliage; and thus expose you to the loss of at least half the beauty of the plant.

R. FISH.

PERPETUAL CARNATIONS.

SOME of these were exhibited lately at Regent Street. I have understood they were first introduced from the continent by Messrs. Knight and Perry. I do not know how many varieties there are, nor am I certain of the right name of one of them. A friend pre-

sented me with cuttings duly labelled, but the man who planted them out managed to confound them as effectually as if he had shaken the tallies in a lottery bag. These matters some of our friends may give us information upon. Few that I have seen would suit a florist; but they are fine things for the lovers of flowers and sweet scent. They are well named *Perpetual*; but their great charm is that they bloom most abundantly, in autumn, out-of-doors, and in windows and greenhouses in winter, without wanting any forcing. I have seen them grown continuously in pots, with various degrees of success. I wish here merely to detail an outline of the system I adopted, with the results of which I am for the present satisfied. The cuttings were struck in a mild heat in the end of summer; when rooted they were docked to furnish more cuttings, which were struck by the end of autumn. Some of the first-struck were planted out in a border in autumn, and defended with evergreen boughs in winter. The rest, and the second-struck plants, had rough treatment in the pots in winter. All of them, the younger ones being previously stopped, were planted out, about six inches from each other, at the end of March, protected a little by evergreen branches. In May, as I wanted something to fill up a row of Cloves, I took the first-struck ones to do so. In August, September, and October they were noticed by every visitor, as many plants had a dozen of open blooms, with scores of buds to open. In August, the second-struck ones were carefully raised with balls, and potted, some singly in six and eight-inch pots, and others three in a twelve-inch pot. Many of these have been in bloom for some time, and others are in bud. Those in the line of the border, notwithstanding the wet, were still so full of bud and bloom, that I raised and placed a number singly in twelve-inch pots, a fortnight ago, and set them in a cold pit. They seem to feel the change but little. The obtaining such quantities of bloom from young plants, I attribute, first, to the stopping of the growth when young; secondly, to the planting out early in rich mellow soil; and, thirdly, to repeated manure waterings.

R. Fish.

CONIFERÆ.

(Continued from page 105.)

JUNIPERUS SPHERICA (Round-headed C.).—A species from the north of China and the Altai Mountains. Dr. Lindley has named it, and describes it as very beautiful. I have never seen it.

JUNIPERUS SQUMATA (Scaly J., or Creeping Cedar).—A low growing, trailing shrub, seldom exceeding three feet high; a native of Nepal and the Bhotan Alps. Hardy only in the southern parts of Britain and Ireland.

JUNIPERUS TETRAGONA (Four-angled J.).—Of this species very little is known. It is a native of Mexico, growing on the road-side from Real del Monte to Chico.

JUNIPERUS THURIFERÆ (Frankincense bearing J.).—A native of Spain; a handsome, upright species, thirty to forty feet high.

JUNIPERUS VIRGINIANA (Virginian Juniper, or Red Cedar).—Native of America, in the States of Maine and Georgia, where it grows to a considerable size, rising to the altitude of from forty to fifty feet. It is very common in the nurseries in this country; and there are some noble specimens at Dropmore, the seat of Lady Grenville, and indeed in most gardens fine plants may be seen of it. The name Red Cedar is given to it because of the beautiful red colour of the inner wood. It is used as a case for black lead, but is not so much esteemed as the Bermuda Cedar for that purpose. The habit is pyramidal, the branches spreading partially horizontally when the tree is old, but in its young state they are upright, but even then not so close as the

J. communis sueica. As it is so plentiful in the nurseries the price is very moderate, even more so than any other Juniper, except the common one. The cause of its abundance arises from the fact that it ripens its seed in this country. The wood being of such a beautiful colour, and so valuable in other respects, combined with the cheapness of young plants, renders it a tree desirable to plant in quantities for the timber. It requires a deep, dry, sandy soil, such as prevails in Sherwood Forest, in Nottinghamshire. It is perfectly hardy.

There are several handsome varieties, though none of them surpass the species in beauty. They are *J. V. humilis*, *J. V. glauca*, *J. V. pendula*, *J. V. aurea variegata*, *J. V. Bedfordiana*, which is beautiful, and *J. V. Chamberlainii*. All these are desirable, and are ornamental objects for the lawn and the Parterre.

LARIX (The Larch).—To the greater part of our readers this tree is well known, both on account of its good qualities as a timber-tree, and its having been planted in immense quantities in almost every part of England, Ireland, and especially Scotland. Though a native of the Alps of the south of Europe it was almost unknown to our ancestors. The country is indebted to a Duke of Athol for bringing it first into notice. He received two plants, cultivated them in pots, and kept them in a greenhouse till they were too large for the place; they were then planted out in two beds in front of the building, where they grew till they attained the height of seventy or eighty feet. Their perfect hardihood being thus established, seed was saved, and the produce planted out as forest-trees, and this led to their general cultivation as timber-trees. Millions of plants were put in on the Highlands of Scotland, which, on account of their quick growth, soon turned to profit;—this encouraged our landed proprietors to extend its cultivation still further; and it was soon found that the ground on which the Larch grew was greatly improved by the falling off and decomposition of its foliage, the Larch being a deciduous tree, that is, it sheds its leaves annually, which very few of the Pine tribe do.

A drawback has come upon the culture of the Larch, arising from the fact that a disease has attacked them within the last twelve or fourteen years. The tops begin to wither and die, then the side branches, and in four or five years the trees die. This has been particularly observed to have occurred to young trees of four or five years standing, but it is spreading to trees of older and larger growth. How far it will spread is of course unknown, but some measures should be taken to arrest its progress. I should advise every tree the least diseased to be instantly removed, root and branch, and burnt. I would also propose a query to all foresters and owners of Larch plantations, to this effect. What is the cause and probable cure of this serious disease of the Larch in Britain? It would not be amiss to procure seed from the Alps, as it is more than probable that seeds from diseased trees would produce a diseased progeny, or even the same effect would happen if the seeds were gathered from healthy trees growing amongst sickly ones. Then, again, the situation in which to plant this handsome tree should be attended to. If the land does not suit it, it will grow too fast, and become hollow in the centre. This is the case in low, rich land. The proper situation is on the sides of lofty hills, in thin gravelly soils. Though for the first three or four years its progress may be slow, yet it will make rapid progress after that time, and by the annual fall of its foliage enrich the soil under it; thus, feeding itself, as it were, by that means. Another important point is close attention to thinning in time, selecting the most healthy and promising trees to remain. These thinning make excellent stalks for such flowers as Dahlias and Hollyhocks. The wood of this tree is very durable, hence these stalks will last longer than any

other kind, not even excepting the oak. The genus *Larix* is a small one; the following are the species:—

Larix Europæa (European, or Common Larch), *L. Sibirica* (Siberian L.), *L. Dahurica* (Dahurian L.), *L. Americana*, and *L. Americana pendula* (Weeping Larch), *L. leptolepis* (Slender Scaled L.), from Japan; not quite hardy in the north of Britain. Amongst these the Weeping Larch is a great curiosity, and worthy of a conspicuous situation in the Pinetum, but none of the rest are handsomer in growth, habit, and foliage, than the common Larch. T. APPELEY.

(To be continued.)

PANSIES RAISED AND GROWN IN ENGLAND.

THIS list, in addition to the one sent me from Berwick, by the Secretary of the Eastern Border Horticultural Society, will form as complete a list as any amateur or dealer need desire.

I am sorry to have to report, that this autumn this favourite flower is suffering much from a disease, something in the same way as the potato. Many collections have almost entirely perished. In particular, I saw that both Mr. Turner and Mr. Bragg, of Slough, had nearly lost all theirs, not one in ten had escaped in the open beds; and that veteran in Pansey culture, Mr. Thomson, of Iver, in Buckinghamshire, informed me, a few days ago, that his stock out-of-doors were quite as bad. If these eminent growers fail, who can expect to escape? The cause and cure of this disease are almost as mysterious as the formidable potato murrain. I would advise every amateur that has a collection to preserve duplicates of his stock in pots, under cold frames, in order to ensure keeping them alive till spring. No doubt this very wet season has aggravated, if not caused this disease, and we may hope, if the anticipated dry frosty weather sets in this month, the complaint may be checked in its progress.

SELEF.—FLOWERS WITH THE PETALS OF ONE COLOUR, WITH THE EYE DARK IN LIGHT FLOWERS, AND LIGHT IN DARK FLOWERS.

Adela (Turner); gold-yellow; fine form, and substance extra.

Cowper (Hunt's); canary-yellow, with a dense eye; a late variety. It was shown in fine condition at the Slough Pansey Show last year.

Crystal Palace (Thomson); a clear white, dark centre; fine form.

Commodore (Turner); a large, dark, mulberry-coloured flower, with a rich golden eye; large, fine, and constant, *Fair Maid* (Byne's); the best white out; extra size and constant.

Flora Superb (Hooper). Another fine yellow variety, with a dark eye; fine form, and constant.

Goliath (Bragg); very large; dark maroon, yellow eye; fine form.

Hercules (Treacher's); rich mulberry; fine form and substance; size immense.

Ibrahim Pacha (Edmond); extra fine; dark mulberry.

Indian Queen (Thomson); fine dark purple.

King (Jennings); very dark; large and good.

Negro (Schofield); dark maroon; firm substance, fine form.

Nox (Hooper); dark crimson, almost black; good form.

Odine (Osfield); fine white, with golden eye; a good old variety.

Ophir (Widnall); rich yellow, with dark centre; fine and large; if well grown, very few surpass this.

Pompey (Hale's); very dark maroon; rich texture; fine form and substance, and very smooth on the edges.

Pride of Iver (Thomson); extra fine form; very dark.

Polypheumus (Thomson); fine yellow, dark eye.

Pluto (Thomson); very dark, nearly black; good form.

Royal Purple (Thomson); extra large; fine form.

Royal White (Thomson); medium size; good shape and substance.

Swansdown (Turner); pure white; fine form; eye dark.

Sultan (Lorton); rich dark purple; substance excellent.

Smut (Hooper); shaded bronze, like *Satirist*, but larger; very distinct.

Viola (Thomson); violet-blue, black eye; very attractive, and a quite new colour; very distinct.

YELLOW GROUNDS, WITH MARGINS OF MAROON, CHOCOLATE, RED, BRONZE, PUCE, &c.

Addison (Turner); yellow, with red margin; novel; constant and fine.

Antler (Hooper); yellow, with a broad margin of purple.

Alexis (Gossett); yellow, with bronzy-purple margin; curious and fine; very distinct.

Amelia (Bragg); cream margin, with pale blue; very distinct and beautiful.

Ariel (Youell); yellow, with bronze-red margin.

Brilliant (Byne); yellow, with broad purple belt; fine.

Cesar (Marsh); yellow, with dark rich maroon margin; fine and constant.

Comet (Thomson); fine show flower; golden-yellow, with crimson-maroon belting.

Crown-all (Thomson); yellow, with purple margin; the finest eye of all Pansies; form good.

Candidate (Thomson); cream, with broad purple margin; a good old variety.

Cunopsis (Hooper); gold-yellow, with rich maroon edging.

Clivo (Bragg); yellow, with narrow purple edging; very pretty.

Chieftain (Turner); yellow, with bronzy-red margin; very fine shape and substance.

Commander-in-Chief (Hooper); yellow, with red margin.

Dialium (Fellows); golden-yellow, dark maroon top petals, lower petals margined with the same; rich, and fine form.

Dr. Marsh (Marsh); golden-yellow top petals, and belting rich red; unique, and extra fine.

Elegantissimu (Thomson); yellow, and bronze-red belting; much superior to *Elegant*.

Euphemia (Turner); straw ground, purple top petals and belting; very fine in early season.

Favourite (Hooper); yellow, and dark maroon belting; extra.

Fearless (Schofield); yellow, and dark maroon margin; fine form, smooth, and great substance; eye very dense.

Great Britain (Parker); yellow, margined with purple; extra fine shape and substance.

Great Western (Hooper); yellow and maroon; large and fine.

Hengist (Turner); yellow and bright red; novel.

Hero (Turner); yellow, and bronze-red; very stout substance.

Joe Miller; yellow top petals, and belting bronze-red; new and fine; very distinct.

Laertes (Hunt); rich yellow, margined with dark maroon.

Lucidum (Parker); yellow and purple; fine form and substance.

Lord Walsingham (Thomson); yellow and purple margin.

Lord Derby (Thomson); yellow and dark maroon; fine, large, show flower.

Mrs. Bragg (Bragg); golden-yellow, rich mulberry-purple margin; a good old variety.

Monarch (Hale); yellow, with purple margin; extra fine.

Pandora (Hunt); yellow, margined broadly with rich, glossy purple; fine form and texture; and very constant.

Renown (Thomson); fine and large; extra shape and substance; first-rate; yellow and purple.

Rising Sun (Turner); bright yellow top petals, bright bronze-red lower ditto, margined with the same; fine.

Sir John Cathcart (Turner); deep gold-yellow top petals, fiery-bronze lower petals, margined with the same; extra fine substance and form.

Sir Joseph Paxton (Betteredge); yellow top petals, and belting rich dark maroon; fine shape.

Thistle (Hooper); yellow and novel, bronze margin.

Timour (Bragg); bronze-yellow ground, with purple margin; distinct.

WHITE GROUNDS, WITH MARGINS OF VARIOUS COLOURS.

Albion (Thomson); white, margined with purple; dark eye; large and fine.

Blue Border (Boyd); white, belted with fine blue.

Blue Fringe (Major); white, deep blue edge; rayed; very beautiful.

Beauty (Thomson); white and purple; very fine and unique.

Climax (Bell); white, with broad purple margin; a good old variety.

Criterion (Hooper); white, with deep blue margin.

Evu (Thomson); straw, and rich dark purple margin; surpasses *France Cyrole*.

Lady Carrington (Hunt); white, margined with light blue; novel and beautiful.

Lady Fair (Boyd); white, margined with puce.

Miss Caroline (Bouverie, Archer); white, with light blue margin; good.

Marchioness of Bath (Wheeler); white, belted with blue; bold, dense eye; fine form and substance; a good show flower.

National (Turner); white, with a broad, light purple margin; well defined; very smooth, constant, and fine form.

Queen of England (Fellows); white, with blue-purple belt; extra.

Rolunda (Hunt); white, margined with purple; fine form, and constant.

Royal White (Thomson); white, with dark margin; extra fine form and substance.

Sir Robert Peel (Hale); white, with fine purple margin.

Sylvia (Griffin); white, with a delicate, light blue edge; elegantly beautiful.

Venus (Byne); white, with fine blue margin.

T. APPLEBY.

FORCING POTATOES.

WHATEVER be the peculiar fancy of the epicure (and have we not all our fancies?), a dish of young potatoes is sure to find admirers at a season when the old ones (however good) have been sent to table until the appetite seems to long for a change. We all know how delightful it is, to see the dish-cover unfold a progeny of young potatoes, instead of the old ones "served-up" in every variety of way that the ingenuity of the kitchen-department could suggest. Young potatoes create a sort of *fêver* for the moment; and the young, "aged" and infirm, must all have a taste of the first produce of the season; but it belongs to a higher genius than mine to describe the feelings which this and other productions create on their first introduction; my duties are more

in the back ground, where the operations are at work which furnishes the article at the time wanted. Now, whatever may be the wants or peculiar fancies of certain individuals, we may take it for granted that every one is glad of young potatoes at the earliest possible time; and to accomplish this no time must be lost. The amateur whose means are limited, must look round and see if any vacant space in any of the heated structures is so far at liberty as to allow a few potatoes to be spread thinly over its surface. To exemplify this matter more, we will suppose that plenty of the earliest kinds of potatoes exist in the root-cellar, or other store. Now, in order to accelerate those intended for forcing as an early crop, a few might be put in heat, as soon as possible, and afterwards they must be planted out into the hotbed, or other heated apparatus, where they are expected to produce their crop. Now, this preliminary progress on the part of the potato may be of a more homely or economical kind than that which furnishes them the means of supporting a progeny. We all know that a potato placed in a warm situation soon begins to shoot and grow, and we also know, that if these shoots are broken off, others succeed them in, perhaps, greater numbers, but much weaker. This second crop is not always sufficient to exhaust a strong vigorous tuber; but the successive efforts of the parent show too plainly that it must at last yield to such an exhausting process. A potato placed in a warm atmosphere will quickly show signs of life; the vital powers which Nature had intended to remain torpid until she called them forth in spring, are now put in motion by an agent, certainly not equally genial, but quite as warm.

Now a tuber or a bulb differs in many respects from a seed; the latter has stored away in itself the germ of a new plant, which it has likewise the power of preserving for a considerable period, or until it be placed in such a situation as to call its vital powers into action. On the other hand, a tuber, or bulb, is only the accumulated energies of a plant stored away for a limited period, which cannot be prolonged to any great extent, while it may be shortened by the forcing process very considerably; at the same time, some sacrifice, either more or less, must be made in securing this early produce. Now, though there are few things committed to the ground in the shape of seed, or roots, that present a more robust bulky appearance than a good sound potato, yet many eminent horticulturists affirm that it is not always sufficiently strong and well set to be able to support its offspring against the attacks of that disease of which we have seen so much, and know so little: whether this be the case or not, it is not necessary here to inquire; suffice it to say, that the stronger and more vigorous the set, the more likely it is to produce a healthy, good crop, other things being also favourable; it is, therefore, important that those required for forcing purposes be plump, heavy, sound tubers, and not by any means too small; the thoughtful economy which reserves those for seed which are too small for table must be suspended here, and sound, good, useful tubers of a tolerable size employed instead. This is the more necessary in the instance of forcing, because the nourishment and support which the parent set affords to its offspring is more required when in this artificial condition than when the young plant is luxuriating in all the advantages of the spring and early summer atmosphere; this latter differs considerably from anything which we attempt to imitate it in, consequently, a more liberal course must be adopted when anything like success is expected.

To the enthusiastic amateur, we therefore say, select at once a few good useful tubers of fair average size, which place in heat, — in the light, so much the better; if not, it is not absolutely necessary; lay them

some four or five inches apart each way, on leafy mould, not too much decayed, and cover them up with the same. This covering is required only to prevent that loss the potato is subjected to if the surrounding atmosphere be dry; if moist, it is of less moment. Other substances might do, as well as leaf mould, but none lift so well, or rather, nothing adheres so firmly to the roots of plants when it becomes necessary to remove them to another place; and this is important for this preliminary part of the process. Occasional waterings may be necessary, but this will depend on the state of the medium they are placed in, and other things. While this is going on, preparations must be made for their final transplanting into some congenial hotbed or other structure; in a usual way, a bed of leaves, tan, or dung, is appropriated to this crop; and though the early part of the process might as well be performed there as the after part, yet, as it would be difficult to ensure the bed retaining its heat so long as would be wanted for both, I have advised the preparation of the seed tubers to be carried on elsewhere, in order to husband the resources of the principal bed, or rather to delay the making of it until the potatoes are advanced as far as they can, with safety to their removal.

We will, therefore, suppose that the potatoes spoken of have sprouted and emitted roots in all directions; through the body of leaf mould in which they are placed; it is then necessary to prepare the future bed, which, if of fermenting matters, must be tested before the roots are trusted upon it. This is easily done by the means advised so often in the formation of hotbeds; and if the heat seems all right, and the frame and lights put on, a certain amount of good, light, and rather dry mould should be put on. This may remain a day or two until it gets properly warmed, when the potatoes may be removed from their nursery-bed, with as much of the leafy mould adhering to them as will do. These may be planted in rows, about fifteen inches apart for Ash-leaved, and similar short-topped kinds, and proportionably more for the larger-growing kinds; about a foot, or it may be less, between set and set in the rows. There is usually a tendency to crowd plants in a frame. The object of a litter for seed seems not of much consequence; but it is questionable whether this overcrowding be attended with the required benefit or not. The soil in the frame being warm, and the lumps of leafy matter adhering to each tuber, the check cannot be much if due care be taken in the planting, and other things favourable to their growth be attended to. It is almost needless to observe, that a full south exposure must be had for the frame, which must not in any way be shaded by trees or buildings on the sides on which the sun shines; the reverse sides may be as much sheltered as can be, always bearing in mind that the shelter of over-hanging trees is shelter with a vengeance, even should it be on the north side of the object protected by it; but more of this anon.

J. ROUSON.

THE VILLAGE FEAST.

By the Authoress of "My Flowers," &c.

THE Word of the Lord declares that he is "blessed" who "standeth not in the way of sinners." Every day we see the truth of this inspired assurance, either in the quiet and prosperous condition of those who keep out of the way of the wicked, or in the punishments and troubles that come down upon those who set at nought the righteous commandments of God. Many a man has kept company with those whose ways were crooked and evil, while his own were decent and respectable; but he has either been obliged to break with them at last, or he has suffered in his own body, or his precious soul, for "walking in the way of sinners," and seen, when it was too late, that the only way of peace and safety is in obeying the commands of the Lord.

The young are especially inclined to be careless about the character of their companions. They are quite content to know and be seen with idle, worthless, young people, if they are not themselves guilty of the follies and vices they walk beside; but, alas! evil, bitter, eternal, are the consequences of such careless indifference to sin and sinners; and it behoves all, high and low, old and young, to "stand not in the way of sinners," for a worse end than "sitting in the seat of the scornful" may be their portion—an end that admits of no repentance, and no hope of eternal life. Let my younger readers read, ponder, and lay to heart, the true and terrible story of George Griffiths.

He was a young man of very quiet, inoffensive habits, by no means one of the idle, profligate youths that infest the village, and the persons who employed him spoke well of him. His mother had not been what a mother ought to be in some respects, but she was fondly attached to him. She was the wife of a second husband; but the son of her youth was good to her, and a comfort in the declining years of her life. She had been struck with paralysis also, and had been for some months confined to her cottage in consequence.

There is, in some parishes of England, an annual abomination, called a "Feast." What it takes its rise from I do not know; but it would be a parochial and social blessing if such seasons of riot and drunkenness were discontinued, and wholly put down; for the only effect of them that is visible is the drinking, disorder, and confusion of the village, and the interruption of work, and squandering of money that invariably takes place at that time. There is generally dancing, penny shows, and such snares laid for the young and giddy; the beer-houses are all as busy as bee-hives; and drinking, finery, and idleness, is the order of the day. Fathers and husbands will spend in one day the week's food of their wretched families, and give up work for that day, and often the next to it, to revel and drink away their senses.

At the last Feast of the parish in which George Griffiths lived, the awful scene took place which I am going to relate. George had been amusing himself with the rest of the community, but in a far more harmless way than many. The beer-houses were full of intoxication, but he was not a drinking character; and although he was amongst the ungodly throng, his head was clear; he had had beer, but was quite sober, and only excited by his high spirits, and the scenes of vain and shocking mirth around him.

One of his companions became so totally intoxicated, that George undertook to see him safely home, as their way was, for some distance, the same. It was late, but the brother of the young drunkard rose and let them in. Instead of going immediately and steadily home, Griffiths was induced to take a glass of spirits at this house, and, in spite of his previous caution, he swallowed a large draught of gin. Then he quitted the house on his way to his mother's cottage.

The next morning, when these two young men got up to go to their work, they found the body of a man lying not far from their door, with his head resting upon some brick-work. It was the almost lifeless body of George Griffiths. Stupified with the gin, he had slipped or stumbled, and his head had come violently down upon a row of bricks or stones, which had caused concussion of the brain, in which helpless state he was found by the very youth whom he had taken home, the evening before, in a state of frightful intoxication. The poor mother's anguish may be imagined, but can scarcely be described, when her son was brought home to her. He lingered through the day and night, and then his soul "returned to God who gave it."

Thus ended the short life of a quiet young man, who stood "in the way of sinners." It is a solemn warning—more solemn than the death of an open sinner, because all see and confess the guilt of open and undisguised sin, and thank God in their hearts that they are not as open sinners are; but they do not see the guilt and peril of quiet lives, when there is no work of grace in the heart. This awful death has set before a whole parish, and all who hear and read it, the startling truth, that they who "stand in the way of sinners" are in peril of everlasting destruction. No man is quiet in the sight of God, but he that has sought and found the "kingdom of God and his righteousness;" for "the work of righteousness" only "shall be peace; and the effect of righteousness, quietness and assurance for ever." Quiet lives before men are only hollowness and

deceit; they deceive ourselves as well as others; we say to ourselves "peace, and there is no peace." We are on the road to ruin.

Did George Griffiths suspect, when he undertook to lead his reeling companion safely home, that he was himself to die in a state of intoxication within an hour? Had any one whispered such a thing to him, he would have said, with Hazeel, "Is thy servant a dog, that he should do this?" He would have turned away in anger and unbelief. But he was "standing in the way of sinners;" he was in the company of ungodly men; he had no friend by his side to lead him safely on. Satan was at his right hand. The bottomless-pit was open before his feet! Past finding out are the ways of a wise and righteous God! The open sinner still lives, to fill up the measure of wrath, or to "turn from his wickedness and live;" while the quiet sinner was cut off and struck down in a moment; a loud and solemn lesson to all who are leading *quiet* lives, but have, in their hearts, departed from the Lord.

A season of great and glorious rejoicing is at hand. It is a time set *apart* for *spiritual* thankfulness, and praise; but it is made a time of feasting and vanity, of revelling and drunkenness, of idle and worldly merriment. Let the young be warned to flee from the evil to come! Let them remember the quiet life and dreadful death of poor George Griffiths. Let them not seek amusement in places where God is not acknowledged, and among persons who regard Him not. Let them remember, that though Jesus Christ died for our sins, He lived as our example, that we might walk in His steps; and, that "they who lead quiet lives, and say at stated times "Lord, Lord," are not entered into the kingdom of heaven. Oh, let them beware of those false hopes and bitter delusions! Let them rest in nothing short of conversion of the heart to God, and acceptance of the righteousness of Christ, as our only justification. Let them flee from the company and ways of sinners, as they would from pestilence and roaring lions, and let them *keep the commandments of God*.

Had George Griffiths lived a holy as well as a quiet life, had he known Jesus Christ and Him crucified, he would not have dared or wished to company with those who defied God's law. Then it would have been well with him. But he stood in the way of sinners, and rushed with a brain on fire into the presence of his Maker! Let the young man lay this lesson to his heart; let him serve and worship God, and take warning by the death of poor George Griffiths! There is no repentance in the grave.

VISITS TO SOME OF THE CHIEF POULTRY YARDS OF ENGLAND.—No. 4.

(PENZANCE.)

(Continued from page 130.)

We did injustice to Mr. Blee's poultry, at page 129, in not explaining that the weights there referred to were taken on the 22nd of September. The cockerel No. 1, in the table we published, weighed, at the beginning of November, 11lbs. 6oz.

At Rosevale, in the immediate vicinity of the town, Mr. Bowman, who, with some few others, laid the foundation stone of the "Cornwall Poultry Society," by exhibiting, in the field of the Penzance Agricultural Show, in 1851, certain pens of poultry, which, even then, attracted great attention, has brought together a most valuable collection. But before we enumerate the many beautiful specimens of which he is the owner, it would neither do him justice to pass over the admirable design and arrangement of his fowl-houses; nor would it be fair to those who may be anxious to avail themselves of the practical knowledge which he is at all times ready to communicate. Built of brick, slated, with floors of the same material, they defy the incursions of rats and mice, formidable foes when once they effect a lodgement in such places. Each division has a separate yard, with curiously devised little latticed passages, by which, in some cases, the sleeping-rooms are reached when a direct communication is not attainable. The roosting-places for Cochins should always be low, say 20 inches; but many of these birds prefer a board to a perch. But let us now go carefully through his list.

Two Punchard hens, which, with the cock, won a prize at Birmingham, in 1850, first meet our view; the scales being at hand, the weight of one proved nearly 8lbs., heavy for the time of year (September), when the laying season ends, and the moulting draws so heavily on the constitution. Exceeded as this race now often is in point both of colour and size, they will always be valuable for crossing with other Cochins-Chinas, where substance and short legs are desired.

In an adjoining court are the elder white Cochins-Chinas, bred from the stock of the Dean of Worcester; the cock now weighs 9½lbs., and his symmetry and breadth of limb are so striking as induced us to ask Mr. Bowman for his measurements. Below will be found the weight of a son of his, of glossy plumage, and, we think, most perfect form. He is here measured and weighed side by side with his parent.

	COCKEREL HATCHED	
	COCK OF 1851.	FEB. 12TH. 1852.
	inch.	inch.
Length of bill	7½	8½
Length of neck	7	8
Length from neck to rump....	14½	12
Length of thigh	8	9½
Length of shank	4	4½
Girth over wing, before legs..	24	23½
Girth over wing, behind legs..	24	20
Girth of neck, lowest part ...	12	13
Girth of neck, by head	7	7
Girth, the back part of thigh..	7½	7
Girth of shank	2½	2½
Breadth across wings	9	7½
Weight	9½ lbs.	8½ lbs.

Such weights speak for themselves. Mr. Bowman informs us that he has already disposed of a considerable number of the white chickens of this year, and as several of the pullets were in proportion equal to their brother, no wonder the demand should be great. Two that were weighed before us, though much younger than the cock, weighed respectively 5½lbs. and 5½lbs. An extensive range of ground under some young trees, and surrounded by net, affords a capital run for his pullets. A few evenings since Mr. Bowman was somewhat later than usual in shutting them up for the night, and the passage leading from this enclosure to their home being narrow, they had crowded one on another at its extremity, where the door was shut against them, till they were tier upon tier—three of the lowest were insensible, and one dead; whether any fright, or mere desire of retiring to their nights repose caused the "black hole" catastrophe does not, however, appear. Mr. Bowman possesses a remarkably fine, light-coloured cock of last year, which formed one of the pen, No. 212, at Birmingham, in 1851, purchased by himself and Mr. Blee, and which carried off the 2nd prize for chickens. His carriage is exceedingly upright, the back hackles like golden spangles, drooping richly over the wing, also the arched neck, in our opinion, distinguishes this breed in a remarkable degree.

We also saw some golden Polands—birds, if we mistake not, from the stock of Mr. Vivian, of Swansea, a Birmingham winner. The full globular tuft of the pullets, while that of the cockerel falls backwards on the neck; like the crest of an old helmet, with the clear ground colour of their bodies will, we think, ensure their registration as, A.I.

Nor must we forget among all these treasures some coal black Cochins-China chickens, hardly old enough as yet to display the rich tints assumed by these birds in a mature state, but indicating even at this early age so many good points in figure and proportion, that we doubt not, but that in due time they will realize most fully all that is now hoped of them. This colour, we should remind our readers, is infinitely more rare than either white, buff or partridge. Some of the birds showed a little gold on the hackle but several were coal black.

Many of our readers will be surprised, we imagine, when they are informed of the extent to which the amateur in poultry, often extends his transactions. Mr. Bowman, who for four years has devoted so much time to this his favourite pursuit, has most kindly permitted us to mention the following facts, which illustrate very fully the observation just made.

During the present year the amount stands thus:—

Number of eggs sold	374
Ditto hatched at home	349
Chickens sold to this time	198
Present stock	117

The eggs were sold at prices varying from 21s. to 36s. per dozen. The chickens at from 21s. to 42s. each, excepting some few objectionable birds which realized from 10s. to 14s. each.

But let it not be supposed that such returns are attainable by every one, who, seeing the prices here realized, rushes into poultry-keeping without that practical knowledge of its various details which has occupied Mr. Bowman's attention for so long a period. If, however, in defiance of our warnings, he is rash enough to do so, the chances of failure and disappointment are indeed great.

Many are of opinion that eggs are greatly injured for sitting by having to travel any considerable distance, and doubtless it would be better to set them without incurring the least risk from being shaken; but the result of the chickens produced from 374 eggs sent away this year by Mr. Bowman, has been highly satisfactory to those who obtained them from him. One curious instance, bearing on this point, was mentioned by him. "Six eggs, of buff Cochins-Chinas, were sent by omnibus to Hayle, thence by steamer to Bristol, on by rail to Oxford, and there forwarded about 25 miles by coach; after so long and so varied a journey as this, six chickens were, nevertheless, produced from the six eggs."

No less than 14 English counties, as well as various places in Scotland and Wales, have received eggs and chickens from Mr. Bowman during the present season. While speaking of eggs, he remarked, that much had been said about their not hatching well this year, but that, in his own case, he considered himself to have been very fortunate with his very early broods—eight nests, of 11 eggs each, having produced 80 chickens, all of which, but two, which were crushed by the hen when a day or two old, lived and did well; but, he added, "I did not do so well later in the season." Besides what has gone into other parts of England from Mr. Bowman's stock, Mr. Wice has also sent away as far north as Halifax, and beyond London in an eastward direction, more than £30 worth of Cochins-China eggs, beside many young birds averaging from 21s. to 30s. each. His correspondents having given him in most instances an account of the chickens hatched from their eggs—he places the average at 8 eggs out of 11.—W.

(To be continued.)

POTATO GROWING.

PERMIT us to offer, for the public good, the extract from our Treatise on Potato Culture, hereafter described, which we trust needs but the thirteenth word, *early*, to be strengthened by an additional syllable, *EST*, to make it complete. On the former, much stress should be laid, and a still greater emphasis on the latter, on which all success depends, whether they are cultivated, or planted by our method therein explained, or not. By a strict adherence to this part of our treatise, and especially the identical word above alluded to, no one need fear diseased Potatoes, and we vouch for good results, believing that Potato disease, by the Divine interposition of Almighty God, will yet prove a blessing rather than a curse, inasmuch as the main crops of wheat or barley in double rows, at wide distances, five feet apart, may be combined with Potatoes with perfect success, and after-crops of many descriptions may also be introduced amongst them with equal profit, such as mangold wurtzel, turnips, and most other garden productions, or, where necessary, whole clean fallows may be made; whereas, formerly it was often with difficulty that land, after potatoes, could be got ready, except in a bad condition, and late in the season, for sowing wheat upon.

We cultivate several varieties of the earliest dwarf selected kinds, and have none diseased, simply for two reasons, namely, *planting early*, and *planting the earliest varieties*, which ripen their tubers about the time of the summer equinox, or at the end of June, before which time but few fears need be entertained of disease in the Potato, as it has

not hitherto manifested itself before this time, except in a small degree. We have no objection to other kinds of manure being applied besides what is recommended in our pamphlet, nor do we see any reason why EARLY Potatoes should not be highly manured, in order to forward their growth before and after they appear above ground, and when devoid of moisture, so often experienced in the month of June, as well as in providing for after-crops. The evil of using manure is confined to late planting, which practice (without arrogance to ourselves) it is found necessary, under present circumstances, to denounce altogether, for, whatever the kinds may be, all are thus attended with bad results.

Some part of our treatise, not hereafter inserted, not being adapted to the present seasons, as we find from experience, requires revising, and is under our immediate attention and correction.

The use of small Potatoes for planting is only recommendable in cases of emergency like the present time, and for those who cannot afford to buy larger ones, and the guidance of the public good, we freely subjoin the following communication:—To plant one acre of land with large earliest Potatoes, 4 ozs. each, at one yard apart, requires 2½ bushels of per 50 lbs.; present value about £5. To plant it with sets half the size, at the same distance, of course requires 10½ bushels; value about £3. And to plant it with sets 1 oz. each, of the common size, now in use, at half the distance, viz., half-a-yard apart (ample space), takes about 10 bushels per acre, equal to a quarter-of-a-pock per rod; present value, say £1 10s., of early selected varieties. Experience has taught us, repeatedly, that large sets produce the most lucrative crops; but it is to be regretted that so few persons can now avail themselves of this opportunity.—ABRAHAM HARDY AND SON, Seedgrowers and Seedsmen, Maldon, Essex.

• An Extract from "Culture of the Potato."

"The first point of importance is the selecting or procuring the best early dwarf kinds, and such as have escaped disease; and, secondly, the time and manner of planting, so as to improve their early habits.

"Any time from September to the end of April may be chosen for planting any kind of Potatoes, provided the weather is mild and dry, the latter being most essential. The land, too, should be in a dry and pulverized state previous to planting, which object should be effected and persisted in, by forking it over and over, as may appear necessary, in dry weather.

"If it is desired to plant previous to March (which we highly recommend), the land being brought into proper tilth, as above prescribed, should be marked into drills four or five inches deep, and twenty-seven inches apart, and the sets or whole potatoes of a middling size, say as large as walnuts, should be planted nine inches distant, with about a teacupful of coal-ashes and soot heaped over each set, to prevent the attacks of intruding insects and frost. Then, with a hoe, cover them with the light dry mould, forming a slight ridge; and lastly, let the whole be completed with the spade or plough, raising the said ridge as high as possible, so that the drill forms exactly the centre. The sets thus secured from wet, frost, and insects, no further care is necessary till the end of March, when the whole may be forked down level, and treated in the ordinary way."

GROWTH OF SHANGHAE FOWLS.

As you have considered the facts contained in my last worthy of insertion in your journal, I beg to continue to report progress. The increase in weight during the fourteen days has been from 9½ oz. to 22 oz. each bird; a greater average than on the previous occasion; but it will be perceived, by the annexed table, that some of the pullets have increased far more than others. None had laid before last week; three then commenced; and laid twelve eggs; which were the three, I am not sure, but think them to have been Nos. 2, 4, and 5. I should add, that three of them were, during six days out of the fourteen, either travelling or shut up and in a pen at the Hitchin poultry show; and I have no doubt they lost weight during those six days, otherwise the total average would have been greater. We will suppose

these pullets to have cost in food 3d. each per week, the total would be for the fortnight, 4s. The total increase in weight is 7½ lbs., which, at say 5d. per lb., is 3s. 1½d.; and 12 eggs, at 1½d. each, 1s. 6d.; makes a total of 4s. 7½d.

I do not consider the cost of the food should be set down at more than 2d. per week, but supposing it to be 3d., does not the above account speak in favour of the Cochín-China breed?

I think the result of the present controversy will show that Cochín-China chickens cost to rear more than other breeds, just in proportion to their superior value on account of weight; and that Cochín-China fowls cost less to keep in the proportion of the lesser weight of their eggs. We have, then, in favour of the Cochín-China breed, the size for table use, the beauty and docility of the birds, the richness of the eggs (and if kept on a large scale, the superior value of the fowls). In time, I think, a general preference will be shown for the flavour of the flesh of the Cochín-China, and then the slight objection to the colour will vanish. In breeding, it will be desirable to keep the legs as short as possible; and on this score, in a short time, we shall no doubt be perfect.

In my above calculations, I have, of course, not considered the present high prices of good birds, on account of their scarcity: first-rate birds will, no doubt, be always of much value. But our aim should be to show that, for general purposes, the Cochín-China breed decidedly deserves to be the favourite; to show that the cost of their keep is certainly not proportionately greater than that of other breeds; and that in every other respect they excel all other kinds of domestic poultry. I beg to annex the list referred to at the commencement.

Pullets Hatched.	Weight Nov. 13. lbs. ozs.	Weight Nov. 27. lbs. ozs.	Increase. ozs.
1. May 15 ..	6 13	7 6½	9½
2. May 25 ..	5 13½	6 13½	16
3. May 25 ..	5 10	6 12½	18½
4. June 12 ..	5 5½	6 11	21½
5. June 13 ..	5 2½	6 8½	22
6. June 13 ..	5 1½	5 14	12½
7. July 27 ..	4 1	4 11½	10½
8. Aug. 20 ..	3 2½	3 12	9½

—Wm. Jno. BREEDY, Chaldon, near Coulsdon, Surrey.

LONDON FLOWER MARKETS.

How are we to account for the very remarkable fact, that whilst Paris has five markets, exclusively devoted to the sale of flowers, London has not one? It is true that flowers are sold at Covent Garden, but then they are of secondary consideration, and are so mixed up with fruit and vegetables, that a proper display of them, or suitable accommodation for purchasers, is out of the question. Those who cultivate flowers for sale may justly complain of the want of a proper site for the exhibition of their productions; and the citizens of London may fairly urge their need of a better supply. The love of flowers may be said to be universal; it is an inherent part of our nature, and it is not too much to expect that if a suitable market was established, and placed on a right footing, the sale of flowers would be increased ten-fold. When in London, a short time since, I noticed upon the parlour table of the boarding-house at which I was staying, a vase of flowers, looking very withered and pitiful. On my remarking their appearance to the landlady, "Ah," said she, "we cannot get flowers in London as you do in the country; that nosegay cost me one shilling, and then I had to pay sixpence more by omnibus for going and returning from Covent Garden to buy it, but it shall be replaced with another to-morrow. I love flowers, and would have a nosegay every other day if I could afford it; as it is, I am obliged to be content with one in a week." Now this good lady represents a numerous class who experience the same want; and there is still a larger, with whom this difficulty of obtaining flowers amounts to a prohibition of their enjoyment; even the opulent would like a better supply. Then we shall soon have the Crystal Palace, with its extensive flower-garden, which cannot fail to give an additional stimulus to the love of flowers, and an increased desire to possess them. Why should not London, then, have a good flower-market, seeing that there is a demand on the one hand, and an ability to supply it on the other?—S. P., Rushmore.

DORKINGS *versus* SHANGHAES.

I AM certain no man can give fowls a fairer trial than I have done for the last ten months with the Dorkings, I having reared nearly one hundred of each sort, and have no other motive in view than to find out which is the best sort to keep. Now the result of my trial is quite different to the account of "Shanghai Mandarin," as I am able to point out. My Dorkings were an old breed I have had for years; my Cochín-Chinas were from the very best breeds, which I purchased for a very long price, wishing to begin with the best. My first hatch was on the 12th of March, having seven Cochín-China eggs and six Dorking eggs under one hen; the produce was five Cochíns and four Dorkings, which were all reared under the same hen. At ten weeks the Dorkings were very nice fowls for the market, but the Cochíns had not a feather on them. At fourteen weeks I killed a cockerel of each sort, and weighed them very carefully, the Cochín-China was four ounces the heaviest, but I am certain one Cochín eats quite as much as two Dorkings; then they were both cooked together, and served up on one dish; the Dorking was a fine plump fowl as could be, but the Cochín was ugly, and looked as if the cook had given him a coat of yellow paint before she sent him in—the Dorking was, of rich white flesh, and the Cochín very little but bone, and although the Cochín was four ounces more weight, the Dorking was worth two of him as a table fowl. The only point where the Cochín-China can have any preference is their laying; they certainly are better layers, but in no other point can they equal the Dorking; and I am convinced, from my trial of the Cochín-Chinas, that they are not the fowls for a cottager, who must have something that will come sooner to profit than the Cochín-Chinas, if he has no other way to dispose of them but in the market. I am certain he can rear Dorkings for very little more than half the cost he can Cochín-Chinas, and he can take his Dorkings to market at three months old, when he must keep his Cochíns five months, unless he takes them without feathers on, when they would look more like young owls than poultry going to a market, for they do certainly look curious things in that downy state in which they remain so long; and any cottager commencing with Cochín-Chinas will very soon find out his mistake, for they are not like other fowls, straying off and finding food for themselves, but standing moping together all day, entirely depending upon what you give them, and that never comes too often, nor in too large a quantity. Now I am not writing what my man has told me, nor what my poultry-woman has told me, but from practice, as no other person has given my fowls one handful of food but myself, and after ten months fair and impartial trial, I have perfectly satisfied myself that the Dorking beats the Cochín-China ten to one.

I would ask "Shanghai Mandarin" what will become of his Cochín-Chinas two years hence, when there is no other way to dispose of them but in the market. What sort of a figure will they cut in a market beside a lot of nice Dorkings at three months old each? they will be laughed at, whilst the Dorkings will find a quick sale, and then will be the time when the cottager will find out which is the best to keep. I am certain my Dorkings are in better condition with what they can find in a farm-yard and a grass-field to stray in, than the Cochín-Chinas are with as good a walk and a very great deal of artificial feeding, and will surpass them in weight; to be certain of which I have just weighed them before I write, making choice of the best of each, and of these I give you the list:—Dorking cockerel, hatched April 1st, 8lbs. 8ozs.; pullet, sister to him, 6lbs. 12ozs.; hen, eighteen months old, 8lbs.; Cochín-China cockerel, hatched March 26th, 8lbs.; pullet, sister to him, 7lbs.; hen, twenty months old, 7lbs. 12ozs. The Dorkings are of my own breed, and the Cochíns from a Sturgeon's hen. What will "Shanghai Mandarin" say to this? I have no doubt but some of the Cochín-China breeders will say that they can beat this in weight, and so they may; but not without a very great deal of artificial feeding. Perhaps, too, they may say it is a great weight for the Dorking, and so it is; but they must be of a pure breed, not like some that a well-known exhibitor brought out last year at Birmingham, crossed with the grey game fowl to get the rich colour. He got the colour, but lost the size, which did

not escape the judges' eyes, and satisfied them that they were mongrels.

I think I have said enough to show that the Cochins cannot have much preference over the Dorkings, whatever they may have over other fowls; but I hope some of my black Spanish friends will let us hear something of their merits, and not let the Cochins carry the laurels which they really do not deserve; and I am certain the time is not far hence when the good old Dorking will again assume the same place as she has done for so many years, viz., second to no fowl as yet known.—FAIRPLAY.

[Our correspondent certainly had not pure short-legged Shanghai's, and he forgets all their good qualities so, frequently pointed out in our columns.—ED. C. G.]

HONEY HARVEST IN SOUTH LINCOLNSHIRE.

I TAKE much interest in reading the remarks in THE COTTAGE GARDENER by Bee-keepers, and if you think well, I will add my share to the information that has already appeared in your columns, on the past season.

The year has been a very peculiar one with us, in the south of Lincolnshire, and the adjoining county of Rutland; and from thirty apiaries with which I am acquainted, there has been, with one or two exceptions, but little produce. In some of the villages in Rutland the swarming began early. I heard of several swarms on the 9th of May. In one village, which is well wooded, and where the clover was very good, the harvest was considered an average one. The cottager who commenced the year with eight stocks, had nineteen swarms and casts, and obtained 180lbs. of clear honey, after leaving the same number of hives that he began with, well provided for the winter. I have, however, heard of no success equal to this.

My first swarm was on the 5th of June, and this I was obliged to feed considerably. It had 14lbs. 5oz. of contents on the 1st of October. The others did not issue till a fortnight after this; and one, a large one, was hived on the 6th of July, which collected quite as much as that which came off a month earlier. In many instances, I have understood, that the late swarms did better than the early ones; and this, no doubt, was owing to the unfavourable weather in June, at the end of which month many hives were lighter than at the beginning. My hives gained in weight about the middle of May; for I find that the hive that swarmed first collected 1lb. 4oz. on the 17th of that month. There was no real working weather after this till the 3rd of July, when they began to gain immensely. A hive, belonging to a friend of mine, collected 6lbs. 9oz. on that day.

I put one swarm in the place of the parent stock, according to the "Country Curate's" directions. This weighed 5lbs. 7oz. in the evening. I was, however, surprised to find, that scarcely a bee left the parent-hive until the third day after removal; and I should be glad if he would inform me, and one or two others, who take in THE COTTAGE GARDENER, and have tried the experiment with a similar result, if this is always the case; as, if so, the swarm is not likely to be much strengthened when it issues late in the day. In one of my hives which did not swarm, I found, at the end of the season, two queens, and a large quantity of brood. I knew the queen to be three years old; and this, therefore, is a proof that they renew their queens when necessary; in which case the natural animosity that exists is suppressed. I saw a more striking instance of this in an observatory hive, where two queens lived amicably together for three or four months, both being fruitful during part of the time; and the old queen expired early in the year.

I should be glad to know if the "Country Curate" has an observatory hive; and, if so, how he contrives to keep it during the winter. I have one in my sitting-room (where I have a fire daily), which is now in a very healthy condition, and well-populated. I helped to swell the population by placing a quantity of brood on the top of the hive in September, which the bees gladly nursed, and as they removed honey which I gave them into the box and added fresh comb, I have allowed it to remain, and it will, no doubt, greatly add to their comfort and prosperity.—OBSERVER.

DISEASES OF POULTRY.

INFLAMMATION OF THE EGG PASSAGE.

[Although the following case terminated fatally, yet, if the judicious treatment had been adopted earlier, the result, probably, would have been different. At all events, even failures act as warnings.]

HAVING at the present time a favourite Cochin hen affected with inflammation of the egg passage (at least as far as I can judge from the symptoms), and being desirous of restoring her, I shall be pleased to know if any better mode of treatment could be recommended than the following.

In the first place I will state, perceiving the hen unusually dull on Saturday morning, led me to examine her with a view of ascertaining the cause, when I found the egg bag much distended; so much so, that I was led to suppose at first she could not pass the egg. I at once put her into a warm bath, immersing her for about ten minutes up to the under part of the wings; after which I made another examination, and finding that instead of the bag containing the egg as I at first supposed, it had become distended and very hard. I then gave her a dose of castor oil, which cleared the bowels freely. At night I administered one grain of calomel, and one-eighth grain of tartar emetic, made into a pill with linseed powder, which, with the warm bath, has been repeated every night. This evening I find the part much softer, and the hen appears rather more cheerful. I intend repeating the pill and warm bath. In your next, I will report again as to my success, or otherwise; in the mean time, I shall be pleased to have some person's opinion who has had more experience in such matters; should the treatment mentioned prove serviceable to others, I shall not regret having communicated it.—A SUBSCRIBER.

[I do not think that any much better mode of treatment could be adopted than that above indicated; it would, however, have been more in accordance with ordinary treatment, if the dose of castor oil had been given after, instead of before the calomel and antimony, as in that case the increased secretions caused by these medicines would have been carried off by the aperient. I should think the warm bath advantageous if given without exciting the hen, and care afterwards taken to keep her very warm.—W. T. TRECHTNER.]

As the Cochin hen died this afternoon, I considered it would be as well to furnish you with a few more particulars for the guidance of your friend. On Thursday I omitted the bath, and as the bowels were irritated, and secretions less healthy, gave calomel one grain, antim. tart. one-twelfth grain, confection of opium sufficient to form a pill. Yesterday the bowels were less irritated; gave hydr. cum creta three grains, rhubarb three grains, compound powder of cinnamon two grains, formed into a pill with crumbs of bread. This morning perceived that the hen was sinking, and a few more hours would close the scene. A few hours after the hen died. I made a careful examination of her; found the oviduct much inflamed and thickened, and of cartilaginous appearance; the whole of the viscera with that exception was quite healthy. I will add, there was plenty of gravel and a manure heap in the yard, to which the fowl have free access.—A SUBSCRIBER.

[I do not think that anything could have been better than the treatment adopted throughout this case; and had the disease been one of acute recent inflammation, there would have been every probability of a successful termination. The cartilaginous thickening of the oviduct appears to have arisen from long-continued chronic inflammation, which, in an advanced state, I should regard as incurable. It would be interesting to know how long the hen had ceased to lay, as that might afford some clue to the period at which the disease commenced, and also whether she was a great layer. As a hen had been lost previously from the same cause, one might almost imagine that there must be peculiar reason for the disease. May it have been over-stimulating food? or the over production of eggs? or want of rest for the oviduct, from the hen's not being allowed to sit?—W. P. T.]

PROFIT FROM WILD FLOWERS.

A FRIEND of mine, whilst staying for the benefit of his health in the Isle of Wight, met with a poor and thriftless family, consisting of a man, his wife, and three children. Judging that the best way of helping them was to teach them to help themselves, he selected one of the little girls, and instructed her by means of two or three lessons in a superior mode of preparing and exhibiting sea-weeds. The project took; sales of them were easily made, and this new employment soon raised the family from a state of indigence to one of comparative comfort. Now, what can be effected with sea-weeds may be accomplished with wild flowers. There are many poor families who, if they could be put into a method of selecting and arranging bouquets tastefully, might find a ready sale for them. Whether as botanical specimens, or for simple nosegays, wild flowers are not turned to the account they might be; they merit greater notice, and a more extended appropriation.—S. P., *Rushmore*.

TO CORRESPONDENTS.

* * We request that no one will write to the departmental writers of **THE COTTAGE GARDENER**. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of the Cottage Gardener, 2, Amen Corner, Paternoster Row, London."

TO PREVENT A HEN SITTING.—J. N. says—"In reply to 'K.' No. 217, the plan I have adopted lately, has been to confine the fowls wanting to sit under a rip for six or seven days, and feeding them *solely* with the commonest boiled rice (14d. per pound I give), with plenty of clean water. This I have invariably found to purge the fowls, and prevent wanting to sit. I named this plan, several months ago, to J. H. Payne, Esq., perhaps he would tell you how it has answered with his fowls, if he has tried it."

ICE (J. W.).—Thank you; the promise was overlooked altogether. "All the details of the same (ice), up to placing led things on the table," was volunteered; and when people make hasty promises, they must either fulfil them, or repent at their leisure. If you get up a strong opposition to the introduction of foreign ice, by collecting all our home stock into stacks or icebergs, and thatch them well, we shall tell how the "things" are to be iced and sent to table when the weather turns warmer. The ice keeps well in the Lowestoft and Yarmouth depôts; but no plan is so economical as the icestacks, *alias* icebergs.

NORTH GREENHOUSE (A Dubliner).—The recess between the buildings will do capital to keep flower-garden plants in during the winter, if you can enclose it with glass, and provide against damp and frost. The north-east aspect is as good as any other for plants at rest; if they have sufficient light, dry atmosphere, and exemption from frost. Many of the showy summer plants would do very well in such a place, all the time they would be in bloom; but it could not be made a house for growing plants in. A work is preparing relative to "the points" of which you enquire.

FLOWER BASKETS (M. Fermagh).—We are not sure that we understand your meaning. You say—"I want information about making, arranging, and planting flowers in baskets." But we shall keep your letter, and think the matter over. We have hardly any right to call our neighbour's attempt at flower-basketing stupid. If he is satisfied, that is quite enough. We shall give a few examples of how the things are generally done. The seeds of *Gaura Lyndheimera* would, indeed, be most desirable; but we fear, now that notice has been taken of the plant, it will be too valuable in the trade to let it out by seeds. Nurserymen tell us that they never find stock enough of any new plant we recommend on our own responsibility.

EDWARDSIA GRANDIFLORA.—N. S. H. says—"A fine specimen, growing on the south wall of the Botanic Garden, Bury St. Edmunds, has produced a number of perfect seeds for the first time, although the tree has been planted upwards of fifteen years." Is this an unusual or rare occurrence in other localities? It is, indeed, very rare for the *Edwardsia grandiflora* to ripen seeds in England, unless it be on the south coast. We never recollect seeing either it, or *E. microphylla* bearing seeds out-of-doors; but this notice will be sure to cause an inquiry as to how far we are right.

BULBS (S. S. S.).—Yes; oblige us by sending the hardy ones, and the stove bulbs also, and we shall treat of them all as they occur. We shall continue to point out those best adapted for pot-culture, and also selections from those genera having many species. Although these bulbs are called half-hardy, some of them are much more hardy than many of the hardy bulbs. *Amaryllis*, *Brunsvigia*, and *Alstroemeria*, furnish examples of kinds much harder than many of the *Narcissus*, and even *Orocroca* genera, as you shall see when we come to them. Pray make every suggestion you think of you are entitled to have them attended to.

CLIANTRUS PUNICUS (A Constant Reader).—"Should the almost bursting buds of one on a N.E. wall be picked off, or any protection given, and how? It is large, and has survived two winters."—It would be safe practice to cut off all the young recent growth, as well as the "bursting buds," and to cover with a double mat, or some equivalent, after the first frost of six or seven degrees. We have seen a nine-year old plant of it, and as large as a moderate peach-tree, killed outright with 20° of frost, although covered with two folds of mat, and against a south wall!

MIXTURE OF LILIES (Twelvemonth's Subscriber).—We very much

approve of your planting two circular beds with a mixture of *Lilium lancifolium* (red and white) and scarlet Martagon, with *L. longifolium* round the outside. See that the bottom of the bed is dry by good draining; and let *L. longifolium* have a little tan, coal ashes, or leaf mould over it in winter. These bulbs flowering at different seasons is not very objectionable, as their growth and leaves are so similar.

RABBITS (Dob).—We do not know of any separate work on Rabbits.

CHAFF-STRAW FOR COWS (J. B. H.).—We can state positively that chaff does not "diminish the milk of cows more than does the straw of either barley or wheat." Cut into chaff, and mixed with sliced mangold, sliced cabbage, or steamed potatoes, it makes an excellent fodder for them.

M. NEES VON ESSENBECK (Queen Mab).—You will have seen & notice of the party to whom you may forward your benevolent contribution.

BOOKS (F. B.).—London's Encyclopædia of Gardening, and The Cottage Gardeners' Dictionary, are quite sufficient for you.

POTATO MURRAIN (A Casual Reader).—You invited our request; your postponement is discreet.

TURNIPS FOR COWS (Amateur).—It is difficult to say how many you should buy for the food of your two cows from this time until the 1st of May; we do not know their size, breed, nor appetite! However, it is a general rule that a cow requires daily in food three per cent. of her weight, so you can calculate how much to give each in addition to the grains and chaff you allow them. We should think 20 lbs. of chaff and grains, mixed in equal proportions, and 15 lbs. of sliced turnips, an ample allowance for a cow.

PEARS ON QUINCE STOCKS (A Constant Reader).—With us the Pears bloom profusely, but so early, that for the most part they are destroyed by the early frosts. By due protection this might be prevented.

TO PREVENT A HEN SITTING.—A Constant Reader says—"I have been recommended, and have tried the plan with success, of keeping the hen in a separate house, without food, for three days. This, I believe, will always have the desired effect."

VEGETABLE OYSTER (Rev. C. A. L'Oste).—We do not know a plant so called. The roots of *Salicaria*, properly dressed, by boiling, mashing, forming into cakes, and frying in butter, have the flavour of Oyster patties. The *Pulmonaria maritima* is called "the Oyster Plant," its flavour being unpleasantly resembling that of the Oyster.

UNDER TENANT (J. S. W.).—You must consult some respectable attorney; no one could give an opinion without a personal interview and explanations.

FENCING FOR POULTRY YARD (Quærens).—Galvanised iron wire is the best, and three feet high enough to keep within it your Shanghaiens. Speckled Hamburgs and Bantams will require it to be twice that height. Your poultry-house is good, but we have our roof thatched inside, by a thick layer of straw confined by laths close to the slates. Warmth is most needed—you can always ventilate enough.

POINTS IN SHANGHAI FOWLS.—T. A. says—"Having just read Mr. B. P. Brent's observations on Shanghai or Cochon-China fowls with much interest, I must beg to mention that the most striking features in 'Shanghaiens' are their great depth of breast, and length and size of thigh (not drumstick); in fact, that they more resemble turkeys than any other fowl yet known in this country. Good breasts and thighs are undoubtedly qualifications of the first importance, as these the meats (brown and white) are to be found both excellent and abundant in this breed when properly fattened. Colour is no criterion as to the purity of the breed, except that there are no black or pure white thorough-bred 'Shanghaiens' in England. I quite agree that the dark birds are the finest, and have almost invariably found that the light-coloured birds are the smallest."

BEES: DESTROYING ROYAL CELLS.—Investigator says—"I am much obliged to 'Mary' for the reference to the 'Shilling Bee-book.' I remembered the passage soon after I had written the letter, and wondered I had forgotten it, as I nearly know the little book by memory, and can scarcely be a practical difficulty which it does not meet. To insure the destruction of all the royal cells, it is necessary to take out each comb on its separate bar, for, though usually on the edges of the combs, I found one or two suspended within those narrow passages, near the centre of the combs, which serve as communications through the hive. I followed the directions at pages 17 and 38 of the 'Shilling Bee-book,' and will add a few hints, which may be useful to a novice. In the first place, do not be discouraged by an imaginary difficulty; I know more than one lady who has successfully performed the operation. Place the swarm on the stock's stand, and carry the stock some distance into the shade. Your assistant must blow a puff of smoke between each comb before you detach it from the sides of the hive. Commence at one side, and take up bar after bar; before replacing one, take up the next, till you reach the centre, and then commence from the other side. I cut out ten royal cells, three of which were sealed over, and the others contained larvae in various stages. The bees were indignant at the frustration of their design, and immediately commenced the reconstruction of royal cells; but the queen obeyed my wishes, and so the cells did not advance."

ERRORS.—C. R. R. says—"There are three very sad mistakes in your notice in THE COTTAGE GARDENER of Dec. 2, in my report of the Country Curate's bee system, no doubt attributable to my horrid writing. In lines 28 and 29 you have it, 'and the bees, about 2 1/2, filled a dinner tumbler of the ordinary size;' this should be, 'and the bees about *three parts filled* a dinner tumbler of the ordinary size.' In line 41 you have it, 'one weighs, empty, 5 lbs., another 7 lbs., the third 9 lbs.:' this should be, 'one weighs, empty, 6 lbs., another 7 lbs., the third 9 lbs.:' In line 55 you have it, 'with the cap in;' this should be, 'with the cap on.'"

ERRORS.—At page 187, col. 2, line 28 from the bottom, for "all," read "not;" page 188, col. 2, line 2 from the top, for "one," read "our;" line 15 from the bottom, for "judicious," read "judicial."

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In this volume the classical reader can refresh himself with a draught of the purest Helicon from the clear and sparkling stream which the Author's narrative resembles. The description of the Geographical, Historical, and Pictorial character of ancient Greece, renews, by its suggestive spirit, the existence of that wonderful people, and almost makes the reader a spectator of the varied incidents of their civil and political career. The Author's object seems purely constructive, so that the minutest features of remarkable sites and scenes, to which great actions or undying thoughts may have imparted a peculiar interest, are carefully described, which render the larger outlines more striking to the imagination of the reader, and more easily filed up. Athens, Sparta, and Corinth—the Temples, Pictures, and Public Walls, of these ancient cities—the Philosophers, the Poets, the Warriors, and the Sculptors—all pass in review, and require but a slight stretch of the imagination, on the part of the reader, to imbue them with the character and spirit of the once living realities.

The author thus simply, yet pleasantly, sketches the preliminary outline of his work, which suggestively conveys the nature and quality of its general composition:—

"The traveller in Greece constructs, in his own mind, from the ruins before him, the once living character of a city, a temple, or a villa. He furnishes them with the beautiful scenes, and refreshes them with the clear waters and cool shades of a Tempe, and decorates them with the fair porticoes of a Pæcile, a Lyceum, and an Academy.

"When Aristagoras, governor of Miletus, came to Sparta, to request assistance from Cleomenes, the king of that city, he brought with him a tablet of bronze, on which was engraved an outline of the earth, and whereon the circuits of seas and courses of rivers were traced. This work was probably the work of Hecataeus, the historian of the Asiatic city. It is the earliest effort of geographical delineation which we read of in the annals of Greece. Although rude and imperfect, it served the purpose of conveying to the mind of the spectator a general idea of the leading features of the countries which it portrayed, and was therefore thought worthy of being brought from Asia into Greece, and of being exhibited by an ambassador to a king.

"In this our geographical introduction to the present work, we shall endeavour to present to the reader a rapid sketch of the geography of Greece, similar in execution to the bronze tablet which Aristagoras put into the hands of Cleomenes. We shall attempt to exhibit to him, in a comprehensive and general outline, the form of its lands, and seas, and rivers. This difference, however, will be observed: we design to construct a map from a view of the country, rather than to communicate an idea of the country from the contemplation of a map."

The author now describes the spot he has chosen for his geographical survey and, after pointing out the leading features which surround it, most appositely remarks:—

"It may reasonably be supposed, that, when Virgil conceived in his mind that noble and original picture, which he has presented to his readers at the close of the fourth Georgic, of the subterranean grotto, in which all the rivers of the earth were born, and from which they issued, by hidden channels and silent courses, into every quarter of the globe, that the idea was suggested to his mind by this particular spot, in which, with respect to the continent of Greece, his poetical vision may be said to have been realized; and this conjecture derives support from the consideration, that the scene which he is thus describing is laid in Thessaly, and, indeed, at the source of the Peneus itself, one of the rivers which rises from this mountain-reservoir at our feet. The reader will also remember the use which our own poet, in the *Paradise Regained*, makes of the *roads* of Italy in his description of the city of Rome, from which they all start, and to which they all return. He will recollect how Milton sends, as it were, his thoughts from that spot, to travel by these routes to the most distant points of the Roman Empire—how, for instance, by the Æmilian Way, he penetrates, in imagination, into the forests of Germany, and traverses the British West; how he thence crosses to the Sarmatians, and beyond the Danube to the Tauric Pæon: and how again, by the southern communication of the Appian Way, he migrates downwards to Syene, and wanders eastward to India and the Golden Chersonese. So it is with the Grecian traveller who stands on the point of which we have been speaking."

In a tour of this nature the reader cannot fail to derive both pleasure and instruction, of the highest and most enduring quality.

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It is thankfully admitted, that the number of families in England who daily unite in social worship, has, since the revival of spiritual religion during the present century, rapidly increased. With the exercise of family worship, however, it is most desirable to encourage the family reading and improvement of the Word of God. But owing to the non existence of any help to the profitable exposition of the whole Word of God, specially adapted to this purpose, the opening and improvement of the Scripture daily read, is too generally neglected. Of the Commentaries already existing, the two which are most highly prized, and which obtain the widest circulation, are those of Henry and Scott; works whose value and blessing can never be adequately told. At the same time, it must not be concealed that these unrivalled volumes are not adapted to the requirements of the domestic assembly. **A Commentary on the whole inspired Word of God, purposely designed and expressly written for domestic use, has never yet been published.** The best divines feel the force of this fact; and multitudes of all ranks of society have long observed and lamented the deficiency.

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THURSDAY, DECEMBER 28, 1852.

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अथवा त्वनन्यथा शक्य बहमेवविधोऽर्जुन । ज्ञातुं द्रष्टुं च तत्त्विन
प्रवेष्टुं च परन्तप ॥ I am such, oh Arjuna, that by faith placed in me, and in no other, alone may men know, behold, and be absorbed in me, subduer of thy foes. 11, 54.

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38, King Street, Covent-Garden,
December, 1852.

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Babiana rubra cyanea " 3 6

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For particulars, see "Autumn Catalogue," supplied for three postage stamps.

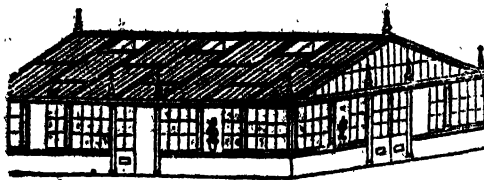
BASS & BROWN, Seed and Horticultural Establishment, Sudbury, Suffolk.

HOLLOWAY'S OINTMENT AND PILLS.—AN EXTRAORDINARY CURE OF A WOUND IN THE FOOT.—Extract of a letter from Mr. Thomas Roe, Druggist of Whitcomb, dated September 25th, 1852. "To Professor Holloway. Sir,—Alexander McFadden, son of a gamekeeper residing in this town, had a scrofulous sore in his foot for four or five years, which discharged very much. Almost everything was tried in the hope of healing it, but without success, and when he was brought to me, I recommended a trial of your Ointment and Pills, and am happy to say they have healed all the sores, and effected a perfect cure of the foot. The father and son are prepared to confirm this statement."

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14 by 10 " " 1 1/2 ft. super. " "	..	0 5 1/2	0 7	0 9
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3 " " 4 " " 20 " "	..	0 6 1/2	0 8	0 10
4 " " 5 " " 30 " "	..	0 7	0 8 1/2	0 10
5 " " 6 " " 35 " "	..	0 7 1/2	0 9	0 10 1/2
6 " " 8 " " 40 " "	..	0 8	0 9 1/2	0 11
8 " " 10 " " 45 " "	..	0 8 1/2	0 10	0 11
10 " " 12 " " 55 " "	..	0 9	0 11	0 12
12 " " 15 " " 70 " "	..	1 0	1 1	1 2

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London: Wm. S. Oake & Co., Amen Corner, and all Booksellers.

WEEKLY CALENDAR.

M. D.	W. D.	DECEMBER 23—29, 1852.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock aft. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
23	Th	Orange-breasted Gooseander.	30.226—30.263	46—30	N.E.	—	7 a. 8	52 a. 3	4 35	12	8 26	328
24	F	White Nun comes.	30.228—30.261	42—43	S.E.	—	8	52 5	5 52	13	0 5. 5	329
25	S	CHRISTMAS DAY.	30.257—30.218	41—25	S.W.	—	8	53	6 59	14	0 34	330
26	Sun	1 SUNDAY AFTER CHR. ST. STEPHEN.	30.252—30.429	43—17	E.	0.1	8	54	rises.	15	1 4	331
27	M	ST. JOHN EVANGELIST.	30.488—30.349	46—29	S.W.	0.2	8	55	4 a 49	16	1 34	332
28	Tu	INNOCENTS.	30.427—30.313	42—31	E.	0.8	9	55 5	5 52	17	2 3	333
29	W	Velvet Duck comes.	30.493—30.485	40—35	N.E.	0.	9	56	7 4	18	3 22	334

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 42.6° and 31° respectively. The greatest heat, 55°, occurred on the 25th in 1827; and the lowest cold, 10°, on the 24th in 1830. During the period 115 days were fine, and on 63 rain fell.

BRITISH WILD FLOWERS.

POPPY-WORTS.—PAPAVERACEÆ.

PAPAVER. POPPY.

Section I.—Poppies with bristly capsules.

(Continued from page 195.)

PAPAVER. NUDICAULE: Naked-stalked prickly-headed Poppy.



Description.—This is a perennial. Roots fibrous, slender, and whitish. Stem none. Root-leaves numerous, on long

stalks, bristly, the lowest being the broadest and shortest, least deeply divided, and into the fewest and broadest segments; milky-green, especially on the under-side. From among these leaves arises usually a single, naked, cylindrical flower-stalk, but sometimes two such stalks, less than a foot high, rather milky-green, clothed with horizontal bristles, and crowned with a single pale yellow flower. Calyx of two oval, concave sepals, clothed with brown hairs; of the four petals, which are roundish, the two inner are rather the smaller. Stamens very numerous, having yellowish filaments, and broadish, flattened and channeled anthers. Germen roundish, greenish, crowned with an eight rayed stigma. Capsule, or seed-vessel, roundish, oblong, and bristly. Seeds black when ripe.

Place where found.—Gathered by Professor Gieseecke, of Dublin, among rocky glens in the hills at Achilhead, on the north-west coast of Ireland.

Time of flowering.—June.

History.—Being hitherto found upon only one spot in the British Isles, it must be considered as among the many plants of which it may be questioned whether they are really natives. At all events, it was cultivated here as long ago as 1730, for seeds of it were sent to the Eltham Garden in that year, by J. H. de Sprekelsen, who had it from the province of Arginsky, in Siberia. Its flowers are as sweet-smelling as the Jonquil, emitting their fragrance especially during the cool of the morning and evening. Sir W. Hooker, and Dr. Lindley, have enrolled it in their catalogues of our native plants. Linnæus doubted whether it is not a variety of *Papaver alpinum*, or Alpine prickly-headed Poppy. Being a native in great abundance of the shores and islands of the colder regions of North America, a seed may have floated to the coast of Ireland. (Martyn. Withering. Hooker.)

THE most wonderful and most gratifying botanical discovery since the demonstration of the sexuality and circulation of the sap in plants, is the fact that Wheat, at present known to botanists as *Triticum*, is only the miserable grass, *Egilops ovata*, improved by cultivation. We noticed this discovery very briefly at page 267 of our last volume, and we recur to it now, in consequence of the lecture and exhibition of specimens of the plant in the course of its transformation, at the Meeting of the London Horticultural Society on the 7th instant.

The Society having announced that something would be seen and said on the subject at this Meeting, a larger number of the members were attracted to the meeting than is usual at this season. The cultivators of the science of botany, and of practical gardening, were there also in greater numbers than usual; and no wonder, seeing that this discovery relates to a circumstance most remarkably connected with either of their departments.

No one has ever discovered the native country of Wheat, Barley, Rye, or Oats; yet, if a year ago we had

suggested that these at the beginning of the world were not created as we have them; or even if we had said that these improvements of wild produce are merciful sweeteners and aids to that toil by which man is ordained to eat bread by the sweat of his brow, we should have been suspected of being disciples of the author of "Vestiges of the Creation." Nevertheless, the opinion has been gaining ground for years, that in the vegetable, and even animal life, the types originally created were very much fewer than the forms now existing seemingly in a state of nature.

It was in order to exemplify part of this question, that the Society were this day prepared with proofs to show the successive stages of development of that wiry, small grass, *Egilops ovata*, a native of the South of Europe, from the wild state, to the full-eared Wheat of the Pharaohs of Egypt, or of the farmers of old England; and, as if on purpose to overthrow the idle theory of the return of improved races to the original types if left to nature, we have the discovery by Col. Chesney, of Wheat and Barley on the banks of the Euphrates,

the remains of cultivation from the days of Jonah, while the whole circle of the history of plants does not furnish a single well-authenticated instance of an improved variety or species, either by chance or design, turning back to the original variety or species from which it sprang. Yet the doctrine of reversion, or disimprovement, is an axiom in the creed of some who bear the weightiest names among living physiologists. Our double Daisies, Chrysanthemums, and China Asters, our double Ranunculuses, Larkspurs, Pinks, Cloves, and Carnations; nay, all our cultivated Flowers, Fruits, and culinary Vegetables, have been improved by exactly the same process as that by which M. Fabre converted an insignificant grass, by seeds, in twelve successive generations, into a true Wheat plant, the most important of all the cereals, and that, too, in the face of, and against, the mature evidence of botanical science; for, by common consent, the Wheat was placed in a widely different genus from that of *Ægilops*. It now appears that the two are not, even specifically, distinct, but only in different degrees of development.

One of the forms of this species (*Ægilops*) was observed by M. Fabre to have a tendency to assume a different form and character under particular circumstances, and this tendency, in a more or less degree, is seen in a vast variety of plants under cultivation, but the cause of it is an entire mystery. It is a quality, a power, given to those plants by God—we see and we benefit by the effects—we can discover the means of setting that power in motion which will produce those effects—but we can lift the veil no higher. We can go on, however, tracing those effects, and we can find that when improvement once appears in a form of the species that is barren, we have no farther means of encouraging it to greater development, but we can retain it just as it is, by extension from cuttings, and we call it “a sport.” On the other hand, if the new form is capable of bearing seeds, we know that in the first two or three generations of seedlings, provided they are not affected by foreign pollen, many of them will turn back to the original species, some of them will be only repetitions of the first departure, and a small number will often show a still greater departure from the first species, or type. Here is the point, then, where we want skilful observers, like M. Fabre, to step in and follow out the tendency, by patient industry, to its ultimate limit, or to any stage of it which we think the most deserving.

This is just what M. Fabre has effected with the *Ægilops*; and although the result of his experiments will surprise everyone, there is nothing new in the whole process, nor anything at all which is not familiar to every gardener. The last improvement in the flower of the Dahlia was obtained by the very means which M. Fabre used in producing the Wheat plant from a worthless grass. This, so far from being a disparagement, renders the discovery of universal importance, for it cannot fail to stimulate others, in different countries and climes, to trace out, still further and fully, a law which the Creator of all has stamped on the vegetable kingdom, for the use and gratification of His creatures.

Here let us pause to raise a warning against two errors, one of which is prevalent already. In the first place, let it be remembered that the wild grass has not been changed into wheat by a process like changing wheat into flour, or flour into bread. To entertain such an opinion would be a dangerous and fatal error. So far from such being the case, the end was obtained by merely following out that which is well understood as a law of all organised creatures. Secondly—let it be remembered, that seedlings from a natural sport will revert to the first parent before the nature of the sport is indelibly fixed by successive generations, is a fact which has never been denied. Every grower of seedlings knows this; but it does not support the doctrine of the reversion of seedlings obtained by cross impregnation; the assertion of such reversion is altogether false and groundless. Let a true cross be obtained from parents distinct in species, and then, if their progeny produces seeds even to endless generations, no one of the seedlings will ever appear the exact image of either of the two first parents.

The lecture on the discovery of M. Fabre, before the Horticultural Society, was listened to with intense interest, and it was delivered by the lecturer whilst holding up a beautiful drawing, representing an ear of the plant from every stage of the experiment. Beginning on the left-hand-side of the drawing, an ear of the original grass, *Ægilops ovata*, was represented; the next ear was the sport, which is called *triticoideus*, that is, wheat-like—but the likeness to wheat is very faint indeed. The first seedling from *triticoideus*, was the third ear in the drawing; and the fourth ear was from the second generation. Ears two, three, and four, looked very much alike, at the distance where we sat; all we could see was that three was somewhat longer than two, and four longer than three; the fifth ear shewed the attainment of a wide difference. It was said to be like a species which grows wild in Egypt, and round the eastern borders of the Mediterranean, and is called *squarrosa*, or rough-spiked—rough and bristly it certainly was—and so on they went, in a row, ear after ear, up to the true wheat-ear itself.

From the lecture we learned that M. Fabre is a gentleman skilful in many things; that his truthfulness is undoubted; and that his word would be readily accepted by all who know him; that his experiments were not carried on in a corner, but out in the open fields, after the manner of a large farmer; that his own men and his neighbours saw all he did, and helped him to do it; that he began in 1840, and that in the twelfth generation, this last summer, the “Wheat itself stood revealed.”—B. J.

COQUET GARDEN.

If any evidence were required confirmation of our opinion as to the possibility of an extensive cultivation of the more choice varieties of fruits for the supply of our markets than at present exists, it might have been found on Tuesday last, at the meeting of the Horticultural

tural Society. From various parts of the country there were some very fine specimens of the best late Pears exhibited, and among these some from our excellent coadjutor, Mr. Errington, who, if we mistake not, resides in a district which is not remarkable either for the superiority of its soil or climate; but still he was enabled to compete with those who are more highly favoured. We hope we shall live to see the day when such varieties as *Glout Morceau*, *Passé Colmar*, *Ne Plus Meuris*, and *Beurré de Rance*, will be offered in Covent Garden Market during the winter and spring months, in quantities as great as the *Lammas*, *Williams' Bon Chretien*, and *Beryamots* are during the early autumn. There is no reason why it should not be so, if commercial growers could only be brought to see what their own interest is. The greatest London market-gardeners have long found out the value of such crops, and it is by them that the market and fruiterers are mainly supplied; but the country orchardists are wholly ignorant of, or perfectly easy on the subject. We do hope they will bestir themselves in this matter, and thereby benefit themselves and the public also.

We had not space last week to finish our remarks on the selection of Pears, and consequently resume the subject.

13. *Hacon's Incomparable*.—A very excellent and hardy Pear, which is in use during December and January. It is of good size, and the flesh is buttery and melting, with a rich, sugary, and vinous flavour, and highly perfumed.

14. *Broompark*.—This is one of the finest varieties raised by Mr. Knight. It is particularly rich and highly-flavoured, and the tree is very hardy. It is not as yet in general cultivation, but we can strongly recommend it as one of the very best winter Pears. It ripens in January.

15. *Nelis d'Hiver*.—If we grew only six Pears, this would be one of them. It is certainly one of the richest of all our winter varieties. The tree is not, from its natural habit, adapted for orchard planting, and must, therefore, be grafted standard high on some strong growing sort. The fruit, although of larger size from an espalier than from a standard, is, nevertheless, equally as rich in flavour, and attains as high a degree of perfection when grown on the latter. It ripens in December, and continues in use till February.

16. *Shobden Court*.—This is but very little known, but being very hardy, and succeeding well as a standard, it ought to receive a greater extent of cultivation than it at present has. It is a very first-rate variety, of an exceedingly rich flavour, and is at maturity during the months of January and February.

17. *Ne Plus Meuris*.—This would, in our estimation, be another of six. It is one of the very best late Pears, and is at this season, along with *Nelis d'Hiver*, the most highly esteemed of any in the market. It is very richly flavoured, and is in use from December till March.

18. *Easter Beurré*.—This is a fine, large, and handsome fruit, which was introduced, not very many years ago, by the Horticultural Society, from Belgium. It is

of first-rate quality, fine-grained, buttery, and richly-flavoured. It is in use from January till March.

19. *March Bergamot*.—This is another of those hardy and richly-flavoured varieties, for which we are indebted to the industry of Mr. Knight, the late President of the Horticultural Society, and one which ought to be in all collections. We all know how difficult it is to obtain very late Pears of the best quality, and how few there are which keep till the spring months; it is, therefore, with much gratitude that we hear of anything which will fill the void which is too apt to be felt at this season. We know of none better adapted for this end than the *March Bergamot* and the following variety. This *Bergamot* is a medium sized fruit, of an exceedingly rich flavour, and as it is very hardy, it will be found an excellent variety for general planting. It is in use during March and April.

20. *Beurré de Rance*.—We do not exaggerate when we say that this is, perhaps, the most valuable Pear we have, for it is in use at a season when all others are gone. There are, it is true, some new varieties lately introduced, which purport to be as late, and even later; but before we have given these a fair trial, and have had as much experience of them as we have of *Beurre de Rance*, we must, in the meantime, give this the palm. It is a very rich, melting, and deliciously-flavoured Pear, and is in use from March till May.

We have thus given a list of twenty of the best dessert Pears we consider suitable for the purpose we have been treating of; we shall now, by way of variety, furnish the remaining four, as the best adapted for culinary use.

21. *Vicar of Winkfield*.—A very large and handsome fruit, which, when grown against a wall with a south or west exposure, is melting, and well-flavoured; but when grown as a standard forms one of the finest stewing Pears we know. Its great size and fine-grained flesh are great recommendations to it. It is in use from November till January.

22. *Bellissime d'Hiver*.—Another large, handsome, fine-grained fruit, far superior to the *Cutellar*, or any of the old varieties. It is in use from November till April.

23. *Bon Chretien d'Hiver*.—One of the most highly esteemed of the old French dessert Pears among the old gardeners both of this country and the continent. To have it at maturity it requires a wall, even in a good situation; but if grown as a standard, the fruit is admirably adapted for *compotes*. In cooking it becomes very tender and fine-grained, and its juice becomes a syrup, which contains a perfume and natural sugar, which cannot be communicated artificially. It is in use from December till March.

24. *Franco Real d'Hiver*.—Another very excellent stewing Pear, which before cooking is coarse and husky, but very juicy and aromatic; but when stewed becomes tender and of a fine bright light purple colour. It is in use from January till March.

We shall conclude our remarks on this subject by just calling the attention of our readers to one or two other fruits, which may be advantageously and profitably planted in such situations; we mean the *Damson* and

Medlar. Of the former, the two varieties which are generally cultivated are the *Common Small Black*, and the *Shropshire* or *Prune Damson*; the latter is the larger. Of *Medlars*, there are also several varieties, but those generally grown are the *Dutch* and *Nottingham*; the former is the larger, but we prefer the latter for flavour.

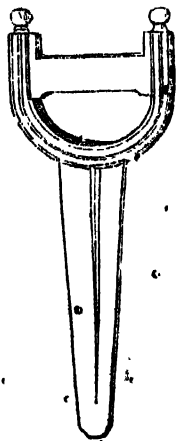
The Market during the week has begun to assume much of a Christmas aspect; and the traveller might imagine himself traversing some forest on the Norwegian Alps, from the immense quantity of Spruce Firs which are standing about in all directions. These, to form "Christmas-trees" for the amusement of juveniles during the coming holidays, will be in great requisition. There is, generally, an air of gaiety pervading the whole; but as this will be considerably developed during the week that is to come, we shall reserve our review of this part of it for our next report. As our notice of fruits has this week extended considerably longer than we anticipated, we shall leave till next week any observations we would have made on this occasion, particularly as all that would have been worthy of comment will be displayed in tenfold importance during that which is to come.

H.

GOSSIP.

A CORRESPONDENT at Birmingham writes to us as follows, concerning *Garden Scrapers* :—

"You have given drawings and descriptions of garden scrapers, which are in some respects desirable, but expensive. They are expensive, because the making involves employing the blacksmith. I enclose a drawing of a scraper made in one piece of cast iron, which in my opinion has many advantages. In the first place, it is cheaper than any wrought iron article can possibly be; it is very light; is ornamental; fixes with the greatest ease, and remains firm in the same place in my garden (a light soil) as long as I please. I obtained mine (and I have a good number) from Messrs. Thomas Jones and Sons, Ironfounders, Bradford-street, Birmingham. They are two shillings each, or eighteen shillings a dozen."



Breadth of scraper to admit the foot, 7½ inches; breadth of the tang penetrating the ground, at the top, 3½ inches; length of the tang 15 inches; entire length from the top of the ornamental knob to the point of the tang, 23 inches.

The following suggestion from the Secretary of a distant Horticultural Society is well worthy of atten-

tion; though we must decline the honour of the judgeship—

"Your useful publication being weekly spread over the whole of Britain, amongst hundreds of floral amateurs, could it not be made the means of bringing them into direct competition, no matter from what part of the country, now that postage is so cheap?"

"The way I would propose is this: Fix upon some flower which could be packed into a small compass, and which could pass cheaply through the post-office. Take, for instance, that popular flower the *Pansy*. Name a day of which the competition is to take place. Supposing that you were to be the judge, then give notice, through means of your Journal, that all flowers must be posted so as to be delivered to you at a certain time; and through the medium of your Journal you could publish the result, together with any remark on new or remarkable flowers which might be submitted for competition. Thus might be brought into direct competition the amateur of all parts of the country. I, myself, who live on the borders of Scotland, nearly 350 miles north of you, might compete with the amateur of Kent or Devonshire. Yorkshire, Cumberland, Norfolk, Essex, and the counties of Wales, might send forth competitors. As for prizes, I think they would not be required, the honour of ranking high would be sufficient."

The following is a list of the *Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

CORNWALL (PENZANCE), January 10th, and 11th. (Secs.

Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)

HONITON, January 12th. (Sec. H. K. Venn.)

GREAT METROPOLITAN, January 1st, 3rd, 4th, and 5th.

RENOVATION OF FRUIT-TREES.

(Continued from page 180)

WE will now conclude this subject by taking the six classes consecutively—

1st. **AGED TREES.**—The treatment of trees which are simply wearing-out is simple indeed; they want "more corn and less whip," to use a groom-like phrase. Such trees as we find them, under ordinary treatment, whether in orchards or kitchen-gardens, have been neglected for a length of time as to root-culture, manurings, &c., whilst surrounded, perhaps, by young, gross, and rampant neighbours, which have batted at the expense of these "good old has-beens." But it often fares with fruit-trees as with men: no longer pipe, no longer dance. However, folks are sometimes wrong about the "piping;" we have seen thousands of hardish-worn fruit-trees, in our day, which would have returned a much greater per centage of profit (had they received timely assistance,) than young and rampant trees, which, in the splendid exuberance of their shoots, only flatter to betray. People get impatient too speedily about these wearing trees; still they do well to think of providing successors, for such is the established order of things.

To come to the point: the soil throughout the roots and fibres of old-bearing and wearing-out trees becomes completely exhausted; no man can give it the texture it originally possessed, or add more quality, unless through the medium of surface-dressings, liquid-manure, or a compost of a most coaxing character applied to the extremities of the roots. The two most steady and enduring plans are—surface-dressing, and culture at the extremities, accompanied by a heavier pruning in the branches. Liquid-manure, although

very useful, is more fitting, perhaps, as a summer application, especially at what is termed stoning-time, when fruit are apt to be cast with temporary droughts. For general purposes, use a compost composed of equal parts sound loam and rotten manure, well blended, whether for the extremities or the surface. In laying it on—and it may be six inches in thickness—let every portion of loose soil be scraped away from the surface, even working down a few inches occasionally between the roots. This is done in the rest-season, say November or December; and before applying the dressing, use a few buckets of rich dunghill-drainings over the surface; such cannot be too strong at this season, and when this has settled, apply the casing of soil, and avoid treading over it until settled and dry: the pruning should have been done previously. In adding to the extreme points, of course the operator must throw out a trench at the extremities and fill it up with fresh compost. In pruning aged trees, let most of the small, inferior spray, closed in the interior, be pruned away, maintaining the prime leaders to the last, unless diseased; for from these channels will the most fruitful wood be produced, especially after inferior or choked spray has been removed. In addition to pruning, we would scrub the bark all over with a coarse brush, using some stable-drainings, with plenty of quick-lime blended—thick as mud; indeed, it will be well to thicken it with clay. Now, it is but fair to observe, that we have never used the latter mixture precisely, but we have much faith in it. We were informed, a while ago, by a Cheshire recter, who is "well-up" in everything relating to gardening affairs, that Dr. Darwin, of Shrewsbury had found the stable sewage the best cleanser of the bark of trees, and that they wonderfully improved in health on its application.

2nd. TREES WORN WITH BEARING.—It might seem at first sight that this, and the former case, are nearly identical, there is, however, sufficient difference to require pointing out. A tree may be worn with bearing before it is seven years old, but it cannot be aged. It may be exhausted in a temporary way, and perfectly capable of rallying in a year or so; but the aged tree can scarcely be said to rally, although it may prove of immense service for many years by generous treatment. There is not occasion, in this case, to have recourse to the trench system at the extreme points; something of speedy action is best, and liquid-manure may be had recourse to, with a rich top-dressing; to this may be added a somewhat sharp amount of pruning, in order to limit the bearing powers of the tree for a season.

3rd. DISEASED TREES.—Another distinct class occasionally; for a tree may be diseased, and yet in neither of the other classes, and may form a complicated case by a union with one or more of them. Now, as a knowledge of the disease is necessary, it becomes eminently essential to ascertain what it is, and its cause. Nearly all our fruit-tree diseases may be thrown into two broad classes, for which we beg to offer the following titles, viz., *Constitutional and Adventitious*; each of which may certainly comprise many cases. As instances of the constitutional, may be offered such as *canker, gum, decaying points, corroded bark, &c.*; and, as adventitious matters, *wounds and injuries of any kind, blights, or corruptions of the system through insects, frost injuries, or those arising from a too low temperature during the growing season, &c.* These may not be all, but they comprise the principal; and it is pretty evident, that the first class are by far the most difficult to overcome; as instance, the *canker* in apples, which no nostrum or recipe has yet been able to conquer, but which mere preventive methods may keep tolerably well at bay. One of the most important proceedings with trees not too old nor too large, is to take care that

the roots are furnished with a pure soil: a loam neither clayey nor sandy.

As this matter of *loam* appears so puzzling to many of our readers, we advise them in all cases of doubt to apply to a first-rate gardener, who, although he may not betake himself to chemical analysis, will yet tell correctly, in a few minutes, whether it be what is known as a general fruit-tree loam. People talk very learnedly about deleterious qualities supposed to exist in this soil or that; but this is, in the main, a mere bugbear. It is, for the most part, principally a matter of texture. Look at our nurserymen, the most knowing of them in such points, how often do they err in their choice of a loam? or, who hears them complaining about its chemical characters? Now, mere garden soil can never equal this loam; it is neither so rich in organic matter, nor so fresh, and it is this freshness, combined with excellency of texture, which renders a pure loam the fittest medium to recover or assist a diseased tree. In all difficult cases, we would plant or surround the tree roots with this loam in its simple state, and if it becomes necessary to impart extra vigour to the tree, let it be by rich surface dressings; and by an occasional application of liquid manure. Of course, in cases of canker, something may be done by scraping the parts clean, and binding in a dressing; we have found a mixture of cow dung, fine loam, and a little lime a good application. The adventitious diseases are too varied to be fully dealt with in a single chapter; and we may just point to the pruning-knife and patience as adjuncts in the case of defects consequent on the attack of insects, which sometimes cause distortions and perversions of the character of the tree. Wounds and injuries may be treated similarly to canker; and those arising from low temperature, by trying to enhance the warmth of the atmosphere by which they are immediately surrounded; to effect this, thin training, the removal of objects which impede the light, and on walls the use of liberal copings, &c.

RAMBLERS.—Here is a case for the root-pruner, or the transplantor, we care little which. This much may be said—where any desire exists to renew the volume of the soil, transplanting is best, the tree not being too old or too large; and where there is no fault in the soil, root-pruning will be perfectly eligible. In addition, a liberal branch-pruning, thinning out, and shortening back freely.

SHY KINDS.—There are some kinds of fruits that are by nature shy, or, in other words, which do not grow freely; these, of course, must be treated in a more liberal way. Stimulants may be had recourse to, and surface-dressings every two years will be very useful, and the occasional application of liquid-manure during the growing season. A compost composed of one-part free loam, one-part rich manure, and one-part leaf mould, the two latter three-parts decomposed, and the whole thoroughly mixed, will be found an excellent application in this case. In general, this coating of some three to four inches will become filled with fine fibrous roots, which will infuse an amount of vigour in the tree hitherto unknown.

GROSS YOUNG TREES.—These are to be distinguished from the class "Rambler," notwithstanding they may be rambling young rogues. It was doubtless inferred by the reader, that the former class signified established trees which show an apparently invincible coarseness. We now speak of that gross fitfulness which is so frequently met with in young trees, not alone through a particular habit inherent, but more commonly through a too generous patron, who perhaps may be a "border maker"—a man of composts; and such men have frequently reminded us of those affectionate animals termed apes, which have been said to hug their young ones to

death in the most appropriate manner. "Save me from my friends; I can manage my enemies."

Well, then, to remove the midden is to get rid of the mushrooms, but it is not always convenient to remove this midden, or, in other words, to change the whole character of a costly border. What then? Why, transplant by all means, adopting instantly our platform mode, or station-making. Those who have not back numbers of *THE COTTAGE GARDENER* to refer to will do well to get our excellent little *Cottage Gardeners' Dictionary*, which should be in the hands of every one who, not being complete in gardening matters, and with whom time is precious, wants merely five minutes' advice, such as he can rely upon; then he will find these and other matters so highly simplified that "he who runs may read."

And thus we take leave of a subject about which much obscurity has existed in by-gone days; but which the advancing spirit of the age has scattered to the winds, or soon will do. Gardeners, however, must not only have reasons "plentiful as blackberries," but be prepared to offer them in a cheerful way, not as a mere accommodation, but as a duty.

Is it necessary to add, that this time of year is most propitious for laying down plans of renovation, and also for carrying them out in at least their first stages?

R. ERRINGTON.

MEETING OF THE HORTICULTURAL SOCIETY.—DECEMBER 7, 1852.

AFTER the lecture on the discovery of the origin of Wheat, the next object which seemed to command most attention was that about cutting-off the leaves of root-crops before the roots arrived at maturity, without prejudice to the weight of the crop, or to the quality of the root, as far as it has been yet practicable to ascertain; but this subject will be discussed more fully next week.

Among orchids exhibited there was, first, a splendid specimen of the true *Vanda suavis*, from the Messrs. Veitch, of Exeter, bearing about fifty full-blown flowers, showing how different and much better the true species is than the variety of it called *tricolor*, which has usurped its place in some of the best collections round London. Then *Limnæodes rosea*, a beautiful new terrestrial species, exhibited in public for the first time. This genus is the nearest in affinity with *Calanthe*: the species exhibited is deciduous, and flowers, after resting, from the bottom of the pseudo-bulbs before the new leaves appear; the flower-stalks are from six to nine or ten inches high, covered with a short soft down, which extends along the footstalks of the individual flowers; the flowers are numerous, in terminal spikes, and opening first from below, as in the *Calanthe*; they are much about the size, or hardly so long, as the flowers of *Calanthe veratrifolia*, and are of the most delicate light rose-colour; altogether a charming plant. The pseudo-bulbs are clustered round and round, from two to three inches long, and closely furrowed with sharp angles like an *Echinocactus* without the spines, so that you could pick it out of a thousand species, at first sight, without seeing a flower or leaf; the leaves I did not see, but they are curiously set on the top of the bulbs by a joint, so that they all fall off at once when they are ripe, leaving a flat top to the bulb. The best way to manage it was read to us from a letter sent up with it. That letter recommends a generous, open compost, as for *Phaius*, *Calanthe*, and other ground orchids, encouraging a vigorous growth after the leaves are fully expanded; to cease watering as soon as they turn yellow; and to rest it like a stove bulb in a hot, dry place—or say, by turning the pot on one side on a high shelf in the orchid

house, there to remain until you see it move of its own accord, like an *Amaryllis*. It was sent from Moulmein, by Mr. Thomas Lobb. The genus was named by Plume, and the price is 63s. to 505s. according to size.

Cut flowers of *Zygopetalum Mackayi*, in varieties, and of a fine spike of *Cattleya guttata*, which made my heart ache to see it go without a handsome prize; but such is not awarded to cut flowers, and very properly too. Nothing of the gaudiness of the *Cattleyas* is inherited by this species; the lip is like that in *C. Forbesii*, and the rest greenish, with brown spots thickly dispersed all over the inside. Yet the specimen had a noble appearance, from the large number of flowers, twenty to thirty, set close on the top, exactly like the flower-head of a horse-chestnut. The next plant was the newest and the oldest plant in the room, *Malva umbellata*, a native of New Grenada, and growing there so high up in the mountains as to enable it to live out-of-doors with us through the summer. It was here once before, and "lost"; the last we heard of it was in 1822, when the lecturer had a beautiful specimen of it from the late Mr. Lambert, from the open air at Buxton, near Salisbury, where it flowered "all over," for a long time in the summer; it makes a dense spreading bush, and throws out its beautiful purplish flowers from the top of the branches like a *Geranium*. Very likely it cannot be bought before this time twelve months; but it is well worth while making a memorandum of it. When it will come out, it will not run the circle of a new *Geranium*—be sold to-day at five times its worth, and the next at not one-third of its real value—as it is in the hands of the Horticultural Society, who will give it to all the nurserymen who are Fellows, when there is a stock of it.

Skimmia Japonica.—The same plant as I mentioned before, and, as I then said, it will be a standing dish with us till late in the spring; or, perhaps, I ought to say Standish's dish, for I think he will not be able to treat us to a better this winter. There is another *Skimmia* in the country, from the north of India, which is very like *Japonica* indeed; it is named *laureola* (laurel-like), because the leaves smell very strong, and like the sweet bay (*Laurus nobilis*). They have been raising a dust about these two beautiful plants, so to be certain, I went to Mr. Jackson's nursery, the evening before this meeting, to see *Skimmia laureola*, for I can almost always see anything new there at my leisure, and I find it is as strongly scented as possible. The leaf is also thinner than in *Japonica*. When I got to Regent-street, I tried *Japonica*, and there is no smell in the leaf, for I spoiled one of them by squeezing to make sure; and now Mr. Standish will know his plant was not hurt by carelessness, and I shall make up the damage.

Tropæolum Lobbianum.—There were three beautiful nosegays, of three forms, of this useful winter-flowering plant, guarded with leaves of the rose-scented *Geranium*, sent by Mr. Ayres, of Blackheath. Two of the forms are quite new, and far superior to the species; one of them, called *Triomphe de Gaid*, is three times larger than *Lobbianum*, and of a much better and brighter colour (crimson); the other is called *Hockermanum*, is as large as the last, a bright orange with a large crimson dash at the bottom of each of the five petals. He asks 2s. 6d. a plant for it, and it is well worth the money; every one who has a nice warm greenhouse should grow the three—no plants can be easier grown, and they flower profusely all through the winter, and run about like a hop all up the rafters, or trailed against the back wall. Cuttings, rooted in the spring, and grown kindly through the summer, will come into bloom in November, and that is the best way to keep on with them; they hold on a long time as cut flowers in a room, and show as bright by candle-light as in the daytime.

Daphne indica rubra.—By far the largest specimen of this I ever saw was here in full bloom, in a square wooden box. I should think it was five feet through, and it looked like a second-sized specimen of the *Asalea indica* at a May show. It was sent by Mr. Edmunds, gardener to the Duke of Devonshire, Chiswick House.

Amaryllis reticulata.—A fine-grown plant, with two scapes, bearing four large reddish flowers each. I notice this to show how little some of the best gardeners in this country know about the names of bulbous plants, for it is really a hybrid *Hippeastrum*, worked from *H. aulicum*. It is quite excusable to call them *Amaryllis*, because the species were published as such before our knowledge of them was complete; but to confound any of the breed of *aulicum*, to the third or fourth generation, with *reticulatum*, or any of its crosses, as far as we know them, shows how little the affinity of bulbs is understood among us. I have not seen the true *reticulatum* these eighteen years, but I can give a sign by which a schoolboy could tell it at once from any of the 400 or 500 species belonging to the order, and also from the more than 4000 varieties into which they have branched out, and that sign is the large white eye at the bottom of the *perianth*, or flower leaves: there is not a single plant in the whole order with this conspicuous mark but itself. The hybrid bulb before us is from *aulicum*, or an early cross from it, by the pollen of *equestre*, or some of its early crosses, and here are the signs—*aulicum* has a large green eye and a smooth eyelid, or margin; *equestre* has the green eye in the form of a star, with a fringed eyelid. Now, the plant in question has a large green eye, not exactly as in *aulicum*, nor quite a star like *equestre*, it has a fringed eyelid, or partly fringed and partly notched: the sepals in *aulicum* are as stiff as wax, and upright; *equestre* has them wavy, and so has this hybrid, but in a less degree; the colour is just intermediate between the two.

There is a distinct class of dwarf Melastomads on the secondary ranges of hills in the East Indies, which are more herbaceous-like than the rest of the order; and they are easily known, from wanting the ribs on the leaves, which is one of the most characteristic features of Melastomads. Roxburgh is the best authority for them. We hardly know any of them in England; we have just got one of them in our Dictionary, an annual, and a second appeared at this meeting from the garden of the Society, and a charming little thing it is; you would take it to be a cross between some dwarf small-leaved *Begonia* and a rose-leaved *Melastoma*. They call it *Sonerila orbiculare*; it is just the sort of thing for an amateur; and although the very leaf of a Melastomad reminds us of a stove and damp atmosphere, the *Sonerila* will do with the same treatment that suits *Begonias*, and they are just as easily increased. Make a memorandum of this also.

Brugmansia, or rather *Datura sanguinea*. When I first wrote about keeping all the *Daturas* out in the open ground, from year to year, I was met in more than one quarter with, "Don't you wish you may get it?" Well, we had beautiful blossoms up from Dorsetshire of the red *Datura*, that has been growing out-of-doors there ever since it was introduced, with hardly any protection at all; and if it is cut down, or any of them injured by frost, up they come next year like Fuchsias, and flower as abundantly. This I was told by the gentleman who sent them, the Hon. W. F. Strangways, who has always helped the Society to a knowledge of his half-hardy gardening. We had a whole tray full of cut flowers from the open ground at this meeting, some of which I told of last February, such as *Azara integrifolia*, *Lithospermum rosemarinifolia*, *Edwardia macrocarpa* and *grandiflora*; this last ripened seed this autumn, at the Bury St. Edmund's botanic garden, on

the open wall. In addition, we had to-day the Spanish *Convolvulus ancorum*, with large white flowers; *Psephosia Andersonii*, with lilac-blue flowers in long round spikes; and one of the honey shrubs from the Cape, *Protosia melifera*, with a beautiful flower-bud, shaped like a sharp-pointed cone, all from the open ground. Mr. Pince, of Exeter, sent two new conifers, one a young plant, looking like some glaucous African cypress, the other a sport from the *Chinese arbor-vitæ*, as it appeared to me, with a bluish shade, which, if it keeps true, will make a very distinct thing. From Plymouth, there were Lemons, from an open wall, in the garden of J. Lockyer, Esq., of South Wembury House, as fine-looking as any from abroad. From the garden of the Society, we had a large collection of plants, besides the Bush Mallow, and *Sonerila*, such as winter-flowering Heaths, a large collection of *Chrysanthemums*, *Manettia bicolor*, *Triumph de gand Tropæolum*, and others, with one of the best winter-flowering plants belonging to the *Justicias* or *Justicia*-looking plants, with crimson-scarlet flowers, and the name of it made every face in the room smile. Those who hear themselves, night after night, abused, and called everything but sonators, without moving a muscle, and even the lecturer himself, whose jaws seem as if made of cast-iron, could not resist the general twitter on his pronouncing the words, "*Serriographis Ghiesbreghtiana*." There was also a good specimen of *Camellia Donkelueri*, and lots upon lots of the *Pompona Chrysanthemums*, and a few of the old ones, but that class was lost "between two stools" this season.

I forgot if I ever told that her Majesty Queen Victoria, and her Grace the Duchess of Sutherland, are two of the most keen competitors at these shows. There is no mistake about them; it is like diamond cut diamond to see her Grace beating her Majesty, and her Majesty beating the Duchess. The Queen was victorious this time by heavy odds, or full twelve ounces in a 7 lb. 8 oz. Pine Apple, of the smooth-leaved Cayenne, against a 6 lb. 12 oz. Providence. The gallant Colonel Baker, of Salisbury, entered the lists with a beautiful Cayenne Pine, 5 lb. 11 oz. There were several more fine-looking Pines, and the Grapes were excellent—the best Muscats from Mr. Maubert, of Norwood, and the finest St. Peter's Grapes from Mr. Davis, of Oak Hill, near Barnet. Nothing could exceed the colour and bloom. But, of all the fruit, a splendid distill of the true old Golden Pippin, from Mr. Snow, attracted most notice. They were from an east wall, and the trees are as healthy as the Downton Pippin. D. BAXTON.

THE INFLUENCE OF THE BEAUTIFUL.

"I know that there are many of the poor who possess fine feelings, and have a keen sense of the beautiful, but such feelings are suffered to rust out and die, because their possessors are too hard pressed to procure themselves any gratification. Else, why is it that we so often see the Geranium or Rose tree carefully nursed in an old, cracked tea-pot in the poorest room, or the *Morning Glory* planted in a box, and twined about the window? Do not these shew that the human heart yearns for the beautiful in all ranks of life?" Such ideas are not new to the readers of this work. If they do not always mirror themselves from the surface of its pages, it is because every one feels that the strong under-current is ever flowing in that direction. Next to the pleasure of expressing strong felt convictions, is the delight of finding that these are in unison with the opinions of the gifted and the good. The above extract is culled from a beautiful short sketch of the "Tea Rose," from the pen of the able, right-hearted American writer, Mrs. Stowe. I have long felt, and said, that the

beauty and variety of flowers was one of the strongest material proofs of the beneficence of the Deity. Had it been intended, we should be satisfied *merely* with the *useful*—had it been designed, we should prize and aspire after nothing but what was essential to the supply of our *necessities*—as some are yet hardy enough to contend ought to be the extent of the ambition of the working classes—then is it not likely “we should have only coarse, shapeless piles of provisions lying about the world, instead of all this beautiful variety of trees, and fruits, and flowers?”

One of the features of the times, is the enlisting of this feeling of the beautiful as a successful agent in effecting mental refinement and social elevation. Who has not thus seen and felt its power? The cheap but pretty dress; an elegant piece of furniture; a handsome chimney ornament; an artist-moulded tea-pot; a healthy, clean plant; a cottage, whose very outside says it *must* be kept in order; each and all of these have, at times, done more to promote cleanliness and thrift than the reiterated arguments of moral suasion. Every such object is a standing, ever-present rebuke to filth and sloth. I know there is many a complaint, because in dress, &c., working-people will imitate their betters; but unless carried to an imprudent extreme, I should be a lenient judge in such matters. I confess, on the other hand, that I begin to see traces of manly self-respect, when the young villager *does* a coat that fits his body, and *doffs* the over-all and cover-all of a sack, called a smock-frock. But, waving such matters, I may be allowed to state, that very many proofs have come under my own observation, in which access to, and love for, the *beautiful*, has completely changed for the better the habits of those subjected to its influence. Nay, more; my own experience justifies me in saying, that so far as *floral beauty* is concerned, in the closeness of the investigation, in the admiration and pleasure perceptible, and in the perfect order, integrity, and propriety of conduct manifested when admitted to range at will within the precincts of a garden, the hard-working men and women of our villages and towns will hardly rank second to any class of the community. Where there is the will, much good may be done without involving either great public show or much self-sacrifice. The Crystal Palace wiped off the unmerited stigma that we were such Goths and Vandals, that our admission amid works and scenes of beauty would just be synonymous with their destruction. We had proved the allegation to be unfounded years before, so far as this neighbourhood is concerned, though I have been given to understand that the county of Herts has not been superlatively distinguished for refinement.

I consider it, then, as a fact proved, not only that floral beauty exerts an elevating power, but that the opening of private gardens, at certain times, to the community, would be considered alike a boon and a source of pleasure. Of course, I make no allusion to such princely places as Trentham and Chatsworth, whose noble proprietors, with large-souled liberality, open their demesnes to visitors every day. Many who could not afford this might yet appropriate several days during the season. I have been urged by many, whose opinion I respect, to mention the method adopted here lately. I retorted, that if it pleased them they had better do it themselves; but then they were so awfully afraid of printer's ink! This was the standing excuse of a friend, who has held some of the highest gardening appointments in the country, and who has repeatedly urged me to make it more public, because it might do great good. If the practice becomes somewhat common, I shall certainly consider this paper one of the most useful I ever wrote.

If I use the plural *us*, it is to avoid confusion, as, properly speaking, as a servant, I could not use the

singular *I*, the modes successfully adopted being either suggested or sanctioned by my worthy employer. When first we began to make a show in the flower-garden in summer, there were a great many visitors, for the largest gardens in the vicinity were far from presenting that high culture and great interest which they *now* do. No gardener of his own accord can well be uncivil to visitors, though I often found they came at most unpropitious periods, when the whole attention and force were required for a definite object. Many, to avoid this, especially if one of the party had ever crossed words with me, used to come after the men had left in an evening, and this broke in upon the little time I looked upon as peculiarly my own. It is no use denying, therefore, that there was a spice of the *selfish* that led me to agree to the proposal to open the garden to the public one day in the week, during two or three months in the season, and, unless in special exceptions, then *only*. In doing so, for some time I adopted the usual custom of sending an attendant round with each party; but frequently these were so numerous, especially when several villages would turn out on the same day, that many would be kept waiting; and then individuals would come and ask “if they might not go round a second time?” These, and other considerations, led us to dispense with the attendant system altogether. We think we make some little improvement every year. Last summer, the gardens were open ten days in as many consecutive weeks, and instead of the whole day, the period was from one, P. M., to six, P. M. Previously to that period, the garden-men had been told of the place they were to occupy at work during the afternoon; so posted, they could see the principal parts, and so as to answer any inquiry that might be put. At the named time, the doors were opened, and people were free to come and free to go: some staying an hour; others several; and others, again, the whole time; there being no porter to admit, and no toll-gate man to let them out.

Has it answered? Last summer, on one of these days, I stood by the side of a great gardener from a large establishment. “I am glad I have come to-day; what a company you have got—the majority are working classes, aint they? How happy they seem! how clean and nicely dressed they are! They seem to go where they please; have you no attendants?” “No.” “Don't you find great mischief done?” “None at all.” “Well, even with attendants, we found ornaments missing from temples and grottoes, &c.; how is it? You don't seem to have even such a thing as an admonitory ticket.” “Can't say; only there is something in treating people so as to show you trusted in their honesty and honour.”

Has it given *universal* satisfaction? No! it would be a wonder if it did. Many, who used to come often when they could have the place to themselves, now seldom appear. They are the *betterer* ranks of people—the would-be-aristocracy of the middle classes—the very first to notice, if not to rail at, every other *exclusiveness* except their *own*. Some have told me it was a *pity* the privilege was made so *common*. Others have sent nice little notes, hoping that they, their friends, or families, might come at some other hours and times different from that set apart for the use of the public. Ah! many will talk nicely, and even do a little towards improving the public, provided they are not brought into close personal contact with it. If, however, the test of numbers when the novelty was gone, and faces that spoke of pleasure, be any sure guide, then I may safely say the satisfaction was *general*; and surely the diffusion of rational happiness, even for a few hours, with the after-thoughts and recollections linked and blended with it, is a something worth aiming and trying for.

Keeping in view the ideas with which I commenced, I should like to have something practical, however simple, for a conclusion. Ideas broached on cottage

and window-gardening have brought me statements from various parts of the country. The other day, I had a most interesting letter from the north of Scotland, a few extracts of which I will now give, as bearing upon the "beautiful," leaving others to another time.

"J. —, came quite out in window-gardening. Fine plants of scarlet Geraniums, *Kentish Hero* Calceolarias, and Fuchsias, graced the window-sill, with Nasturtiums, and Ovary plants trained up the side, a little amongst the ivy. People stood and looked as they passed; it seemed quite a new dodge to the natives. Altogether, it gave the house a very gay and cheerful appearance. Some Hyacinth-glasses, filled with beautiful grasses, which stand on the chimney-piece, look very nice at this season of the year. Could you not launch into THE COTTAGE GARDENER an article on Grasses, if so be dead flowers were not foreign to your proscribed bounds. I am sure a very interesting graminaceous group might be formed for a few pence. The pots or receptacles, ornamental, if come-at-able, could be filled with moss, with some of the best on the top, and the grasses stuck into it; tufted-growing sorts could be put in so as to appear as tufts; and the looser growing ones could be ranged according to their habits. A few branches of Everlastings might be put in amongst them, by way of variety and embellishment. To cottagers of limited means, a group of this sort, even on the window-sill, might be a great source of enjoyment, at once cheap, pleasing, and interesting."

I can confirm the above statement. Knotted grass, Feathery grass, and Shaking grass, &c., have been coming into vogue in this neighbourhood for two years, and that solely owing to the example of a young lady, a tradesman's wife, who ranged the hedge-sides for them about the time they were in bloom. She lived in a pretty cottage by the highway-side. In ordinary cases, it would have presented nothing extraordinary; under her tending care it became a miniature Paradise for neatness and beauty. At a pinch, she has frequently been known to clip and clean her grass-plot in a morning; but her next to ubiquitous movements were not confined to garden and house. The love of the beautiful was no dreamy inoperative principle with her. It acted itself out in kindness and sympathy. Hear of an accident, a heavy misfortune, a severe case of affliction, and you hear of that woman having been there, to cheer, to console; to help by word and deed. She has removed to another part of the country, amid the regrets and the warm sympathies of a neighbourhood. But the influence of her little garden and her large heart have not gone. Every bunch of feathery grass keeps her in remembrance.

A few bunches of Everlasting Flowers between the bunches of grass are a great improvement in such groups. The other day I saw a bunch of the flowers of *Aphelaxis* so used. The whole of that genus, and also *Phenocoma*, *Helichrysum*, *Gnaphalium*, and *Xeranthemum*, may be so employed. *Gnaphalium arvense*, *gracile*, and *candidissimum*, are low-growing, hardy, herbaceous plants that any cottager may grow by the side of a pathway. They are now generally grouped under *Helichrysum*. The first-named has beautiful yellow flowers, which will retain their beauty for years, though I cannot say where it is to be had, as this bedding-system is making sad havoc with fine old plants. Then, there are the *Xeranthemums*, free-growing annuals, which require to be sown in April, in common soil, and though they grow generally three feet in height, yet the flowers, when well dried, will keep their colour for years. Such low-growing, hardy annual *Gnaphalium*, as *obtusifolium*, *serotinum*, and *undulatum*, may be so used, and all present a very pretty effect.

• R. FIEB.

THE CHRYSANTHEMUM.

A CORRESPONDENT (*Cato*) has written requesting information respecting the cultivation of this very fine autumnal flower, so as to produce such blooms as Mr. Taylor exhibited at the Stoke Newington Show on the 23rd of last month, and also a list of the best varieties, to enable him to select a collection from. I did write a short paper or two on the culture of the Chrysanthemum some two years back, and the heads of those papers are in the Dictionary also. Since those papers were written there has been a great improvement both in culture and in the varieties, so that I think a few additional instructions, and a list of the best varieties, will be acceptable not only to "Cato," but also to our readers generally, especially such as do not possess the entire COTTAGE GARDENER, or *The Cottage Gardeners' Dictionary*, though I may venture to say the latter work ought to be in the hands of every cultivator of plants, fruits, or vegetables, in Great Britain.

There is one recommendation to the *Chrysanthemum* that no other florists' flower possesses, and that is, it is so easily kept through the winter. All the rest, if I except the Rose, and perhaps the Fuchsia, have a difficulty about them which renders their preservation unscathed through that dreary season a matter of care and uncertainty; but the *Chrysanthemum* may be preserved with the least care imaginable, either in a pit or cold frame, or even out-of-doors, if the pots are plunged over head in coal-ashes, placed on the south side of a wall, or low evergreen hedge. The only protection they require is a light covering, in very severe frost, of dried bracken or common fern.

In addition to this extreme hardihood, this plant is as easy to propagate as a willow, every cutting will grow, and it can be propagated also by layers and seeds. I will briefly describe these three modes.

By Cuttings.—The best are the young tops, taken off when four or five inches high; reduce them to three inches in length, cut off the extreme top, and about an inch of the bottom; trim off the lower leaves, and put the cuttings round the edge of a five-inch pot, filled with light rich earth, and a thin layer of pure sand on the surface; then give a gentle watering, and place them on a heated surface of sand, or plunge them in a gentle tan-bed, placing a large hand-glass over them. This should be done as soon as the shoots can be got, in order to have them in a forward state early in the year. They will, with moderate care as to shading and watering, soon make roots, and should be immediately potted off into small pots; let the tops be cut off again, and subject them to this treatment every time they are potted, in order to cause side-shoots to break out, and thus form low, bushy plants early in the season. This is a desirable point to accomplish as soon as possible; for if they once get legs, long as a greyhound, their beauty is spoiled for that season: no cutting down afterwards will effect a reformation in their appearance.

By Layers.—The branches, when simply brought down to the soil, emit roots plentifully. This facility of rooting is taken advantage of to obtain low bushy plants. To effect this, plant out in an open situation a lot of old plants. If the plants are laid sideways when planted, the shoots can be pegged down into small pots more easily. These make low, bushy plants, well furnished with flower-buds, with very little trouble. Cut the layers off as soon as the pots are filled with roots, repot them into six-inch pots, and shade for a few days until they are fairly established, then treat them as you would the plants raised from cuttings.

By Seed.—This is not very plentifully produced in our dark, foggy climate, but it is produced in green-houses sparingly. Save and dry, and keep it dry till February or March. Then sow it in shallow pots, in

light, rich soil; sow shallow, and cover slightly with very fine sifted soil, giving very gentle waterings when the soil is dry. The young seedlings are very succulent, and soon damp off if too freely watered, or in too damp heat. The best place for them is on a shelf close to the glass of a good greenhouse. Prick out the seedlings, as soon as they can be taken hold of, into the same sort of shallow pot, and when they have made a still further growth, pot them singly into three-inch pots, and afterwards treat them as you would cuttings. Some may flower the first year, but they will all certainly bloom the second. This is the only way to procure new and improved varieties.

To cultivate the *Chrysanthemum* with a view to exhibit it, some extra care must be devoted to it. During the time of growth, the plants should be fully exposed to sun, light, and air. They should by no means be crowded together, or amongst other plants. The best situation I ever found for them was in a single row, on the side of an open walk. In this situation, from May to August, they will grow bushy, be furnished with broad, healthy foliage to the pot edge—that is, if rightly managed in three particulars, namely, repotting in very rich soil; freely watering at the root (occasionally with liquid manure), and frequently syringing over the leaves and branches; and, lastly, frequently stopping. At the end of August they should be in nine-inch pots, and then should be stout, bushy plants, with the flower buds in abeyance, or dormant. The buds should just make their appearance in September, and grow on slowly till October. The plants will then be really handsome objects, independent of bloom, and will require no sticks, nor any kind of support.

In order to have a greater show of bloom, some growers place three or four plants in a pot, but I cannot commend that practice. A greater number of flowers is obtained, it is true; but it is at the cost of a sacrifice in the size. The largest and finest flowers are always produced on single plants, and no censor will give a plant a prize in preference because it has a greater number of inferior blooms upon it. If not intended for exhibition, the placing a number of plants in a pot or tub may be a praiseworthy practice. I saw, very lately, in the conservatory in the Royal Botanical Society's Garden, in Regent's Park, a box, more than two feet across, closely filled with many plants of a tasselled-flowered *Chrysanthemum*, and a fine object as a mass of bloom it certainly was; but when the flowers were examined individually they were very common-place indeed. I have, in my greenhouse, several pots, with three or four plants in each, which, viewed at a distance, are very passable—nay, even showy; but they are not fit for an exhibition. "Cato," and every grower for exhibition, then, will be wise if they adopt the single-plant-in-a-pot system, if they wish to have really large, good flowers, either to be exhibited in pots or out blooms.

T. APPLEY.

(To be continued.)

CONSERVATIVE WALLS.

(Continued from page 184.)

WHAT is the use of a *Conservative Wall*? Previously to putting up any building, the first consideration is, of what use is it? That is the question. To the strict utilitarian, whose ideas are confined to the profit and loss on any undertaking, the conservative wall will appear a perfectly useless building; the objects to be grown against it are useful neither for food nor clothing. To a mind so narrowed, I cannot produce any argument to prove that a wall to be covered with ornamental and flowering shrubs is of any use. He could easily understand that a pinery, a vinery, or a peach-house would

be of some use. The fruit would be fit to eat, and would be a pleasing enjoyment after dinner, accompanied by a glass of good wine. I do not deny this, by any means; and, in addition to the mere eating of such delicious fruit, there is, to a more elevated mind, quite as much enjoyment in seeing such fruits bloom, grow, and come to perfection. To a mind still more refined, there is a still higher enjoyment in cultivating and bringing to a high state of perfection plants cultivated only for their fine foliage, or highly-perfumed beautiful flowers, the gems of the earth. Shakspeare says, "the man that delights not in music is not to be trusted;" and I may venture to say, that the mind that delights not in flowers cannot be very amiable!

Now, the use of a conservative wall is to grow plants against it to a higher state of perfection than they can be grown in pots, more especially such plants as will not quite bear the vicissitudes of our climate. For such purposes it is admirably adapted; and this is no theory only, it has been borne out in practice in various places—private gardens. I mentioned some in my last paper on this subject, and now I need only refer to the conservative walls at Kew, and Chiswick, as instances of public gardens, where they may be seen clothed with beautiful specimens of plants in the greatest luxuriance. But there is another use of plants grown in this manner, and that is, the proving their capability of bearing our climate. Many plants are imported from warmer climates, of whose power to resist or bear our frosts we have no knowledge. I remember the day when the *Acouba Japonica* was cultivated in the greenhouse only, and now every tyro in gardening knows that it has proved one of the hardiest of our evergreens. Had conservative walls been in existence then, this plant would have been planted against it, and its perfect hardihood proved at once. Again; if there is any truth in the doctrine of acclimatation, or the art of hardening, this wall is a proper school for the plants; and it would be a very interesting pursuit to endeavour to acclimatize plants by placing them first against and under the sheltering influence of such a wall previously to planting them out in the open border, when they had acquired a woody texture, for it is a well-known fact, that old hard woody plants will bear a greater degree of cold than the same plants when young and soft-wooded. And, thirdly, plants against such a wall are more certain to bear seed than such as are grown in pots, or even in the borders of a conservatory, for this reason—in such a situation they are more likely, nay, certain, to produce seeds, from the fact that they have more of the stimulants (air and light, combined with protection) to cause such a natural effect. The production of seed is a step gained in the art of hardening plants, because it is supposed that plants raised from seed saved in a colder climate than their native habitat will have a more robust constitution, and thus, by a natural process from generation to generation, the great grand-children of plants brought originally from Japan or Mexico will be as hardy as our oak or hazel. I do not say positively this will be so, because I do not forget that the Dahlia, the Potato, the Cucumber, and the Melon, are probably as tender now as they were the first year of their introduction; but it is plants with a more woody texture that would probably be acclimatized, if the art of hardening by a conservative wall were systematically and judiciously carried on for several generations.

Such is my answer to the question, What is the use of a conservative wall? and I think the reasons given are quite sufficient to bear out the idea, that it is a useful as well as a beautiful object; and then follows the second query, How is it to be built? The answer to this will include the aspect, material, and the mode. The aspect of that model of a conservative wall at

Chateworth is nearly due west, and though, in that instance, the aspect is of little consequence, because of its being heated, yet, in the case of a wall not heated, that aspect is, I conceive, the very best, and, for this reason, should a frost happen any night, the plants may be slightly touched with it, but will have time to be gradually thawed before the sun reaches them, and so be less injured than they would be if the wall had an east or a south aspect. For the sudden extremes of heat and cold, or *vice versa*, are the circumstances so destructive to half-hardy plants. Even a north is better than a south aspect, though not to be preferred for many plants; yet the *Camellia* thrives best on a north aspect if planted out-of-doors. Several instances of this may be seen at Chiswick. They are planted there close to a wall on the north side, and grow well, and frequently flower well too, if there is a season without late spring frosts. The reason of this is easily understood; they are not subject to such sudden and violent changes of temperature as they would be if planted against a wall with a south aspect, and so are not stimulated into growth so early in the season as to be nipt by the frost.

The west, then, is the best aspect for the generality of plants suitable for a conservative wall, and the material I consider the best is a dark-coloured brick; dark colour retains the heat, light colour repels it; hence it is, that a black coat is warmer than a white one on a sunshiny day. If the dark wall has had the sun shining upon it the whole of the afternoon, it will retain the heat much longer than a light-coloured one. This is a fact I need not prove. Then a dark brick should be the material, if the wall is not heated artificially. The way or mode by which this wall should be built, is first to lay a good foundation, broader than ordinary, in order to allow space to have a hollow space in it, whether it is to be heated or not, for that is a fact now well understood, that a hollow wall is warmer than a solid one. Indeed, all garden walls, whether for the purpose of growing plants or fruits, should be constructed in this manner.

T. APPELBY.

(To be continued.)

THE BIRMINGHAM POULTRY SHOW.

SEVERAL attempts have been made, of late years, with more or less success, to trace the history and origin of our different varieties of domestic poultry. There is, however, no difficulty either in ascertaining the commencement of those exhibitions which have done so much to improve the quality, and to extend the taste for the purer and better breeds of poultry, or in tracing the steps by which they have, in a wonderfully short space of time, obtained gradually, and almost unperceptibly, their present high position.

To the Yorkshiremen, we are undoubtedly indebted for having originated and brought to a considerable degree of maturity these interesting gatherings; and we remember the time when it was thought almost a reproach upon the proverbial shrewdness of our Yorkshire friends, that they had given themselves so much trouble upon what had been long considered so trifling a subject. They, however, persevered, and soon established, within the circumference of a few miles, poultry shows at Leeds, Bradford, Huddersfield, Halifax, Keighley, Otley, Weatherby, Holmby, Stanwood, and Bretton, each of which, in its locality, is well supported. But it remained for the Birmingham and Midland Counties Society to make the attempt on a large scale. They soon succeeded in establishing an exhibition which has not yet been approached either in point of numbers or of excellence; and they are fairly entitled to divide with their more northern brethren the credit of having revived and brought to its present state of advancement this interesting and profitable branch of rural economy. Poultry, which had been looked upon by the farmer as beneath his notice, has now, by their exertions, become a source at once of profit and of pleasure; and, in proportion

to the food it consumes (much of which would otherwise be wasted), and to the capital and labour employed, in, we undertake to say, as remunerative as any stock upon his farm. To the country gentleman, the amateur, and the fancier, what so ornamental, and at the same time so useful, as a nice, uniform lot of pure-bred fowls? The ladies, too, may participate both in the amusement and the benefit derived from their feathered favourites, from the stately Shanghai, and the brilliant Spaniard, down to the little dapper Golden or Silver Sebright, Bantam, rivaling the pheasant in beauty. And—last, not least—can a cottager keep anything about his premises from which he and his family may derive more of mingled pleasure and profit than a few heads of good poultry?

For the gratification, and, we trust, for the benefit, of all classes of our readers, it is to a description—impartial, we hope, and not unprofitable to the poultry-keeping world—of the fourth exhibition at Birmingham, that we purpose to-day to devote a greater proportion of our paper than is usually given to one subject.

This exhibition commenced on Tuesday, the 14th of December, in the spacious and well lighted building known as Bingley Hall. Considerable improvements have been made in the hall itself since the last show took place within its walls, and the visitors are indebted to the proprietors and the committee for a corresponding increase in the comfort they enjoy, and the facilities afforded to them in viewing the specimens. Indeed, the arrangements in these respects appeared to us to be quite unexceptionable.

In point of numbers, the exhibition of 1852 exceeded that of 1851 in every class, as the following table (which may be interesting for purposes of reference) will show:—

PLANS ENTERED.		1851.	1852.
Classes			
Spanish	.. ..	53	64
Dorking	.. ..	117	142
Shanghaies	.. ..	154	275
Malays	.. ..	35	40
(Game	.. ..	127	164
Golden pencilled Hamburgs	.. ..	20	13
Golden-spangled Hamburgs	.. ..	21	26
Silver pencilled Hamburgs	.. ..	48	58
Silver-spangled Hamburgs	.. ..	41	66
Poland	.. ..	41	68
Cuckoo	.. ..	5	6
Rumpless	.. ..	6	4
White-crested Golden Hamburgs	.. ..	2	—
Andalusian	.. ..	5	2
Ancona	.. ..	6	1
Frizzled	.. ..	1	4
Norfolk or Surrey	.. ..	2	2
Bantams, Gold laced	.. ..	20	35
" Silver laced	.. ..	11	6
" White	.. ..	10	12
" Black	.. ..	16	13
" other varieties	.. ..	6	5
Pigeons	.. ..	120	85
Geese	.. ..	17	18
Ducks	.. ..	71	73
Turkeys	.. ..	25	23
Guinea-fowl	.. ..	14	8
Extra Class	.. ..	30	—

The managers of the show have this year omitted some of the varieties, or sub-varieties, included in the list of last year. With all due deference, we question the propriety of this alteration. Although principally got up for the benefit of the farmer and the amateur, these exhibitions are interesting to the scientific naturalist, and have derived, in their time, much benefit from his investigations and researches. To him, independently of their beauty, and the pleasing variety they made, the specimens entered last year as "Ornamental Poultry," and several curious sub-varieties besides, were of peculiar interest, while they were objects of attraction to others also. We hope to see room afforded, upon future occasions, for specimens of this description.

We should also strongly recommend the reconsideration of the rule which permits old and young fowl to be shown in competition in the same classes. Where there are classes

for chickens exclusively, all chickens should, in our opinion, be shown in them. In many varieties, especially of what are known among fanciers as "feathered fowl," old birds are shown to a great disadvantage against chickens, whose feathers are necessarily more clean and pure in colour; and in every class this practice admits of a sort of speculation on the part of the judges, whether or not the chickens will some day be better than the old fowls are now; instead of their being confined, as, we submit, they ought to be, to a simple, because certain, decision which of the two or more pens is the best at the time of the show.

Before we proceed to notice the different classes, we will mention the only other drawback—and in our opinion it is a serious one—to the Birmingham Show. It is the very objectionable practice of employing a dealer as one of the judges. To it may undoubtedly be traced the dissatisfaction, "not loud, but deep," expressed by many good judges, both at the last and the present show, with some of the awards made. We have no personal feeling in the matter; it is to the principle, and not to the individual, that we object. It is not in the nature of things that the confidence of the public should be placed, or expected, in any man who may be the seller of the very birds of which he is called upon to judge. It is to inspire confidence on the part of the exhibitors—not to attach suspicion to the judges—that we thus contend that dealers should not be eligible as judges. The task of finding fault is always an invidious one, but as public journalists, and having the public good exclusively within our view, we cannot be silent upon a point which is operating much to the disadvantage of exhibitions, which we are convinced, although yet, as it were, in their infancy, have done, and are doing, much good; the more especially when we know the opinions of many of the owners of the best stock, and that gentlemen of the highest character and honour, and who are as good judges of poultry as England can produce, have repeatedly refused to act in the capacity of judges at our shows, on the ground alone, that they will not, by becoming their colleagues, countenance the engagement of dealers as judges. Hence it is clear that more is lost than can be gained by employing the latter. We are by no means sure that the Birmingham committee themselves have not met with such refusals this very year; but we know that in the recent case of the Hitchin show, Birmingham itself, York, Leeds, and Hull, were ransacked up to the very day before the show took place for a judge, and that there was no other difficulty in the way. For these reasons, we very sincerely trust that this manifest evil will be remedied another year, before its consequences are more severely felt; that confidence, lost in some, and waning in many amateurs, may be restored; and that, all cause of suspicion being thus removed, the decisions of the judges will be acquiesced in with that respect which confidence can alone inspire.

We now turn, with pleasure, from the ungracious office of fault-finding, to the details of what has taken place—in spite of the drawbacks arising from the causes to which we have just referred—one of the best shows of poultry (if not the very best) upon record.

We need scarcely say that the classes, where there were so many, were unequal in point of merit. Following the orders of the catalogue, we commence our observations with the *Spanish*. Until the *Cochins* became, within the last year or two, dispersed throughout the country, no race of fowl were greater favourites than the *Spaniards*. The brilliant lustre of their sable plumes, contrasted with the white face and red comb—their size, their stately and upright carriage, combine to make the male bird one of the most beautiful of our domestic fowl; while the glossy and uniform appearance of the hens render a nice flock of *Spanish* most agreeable to the eye. So much so, indeed, that they are often styled "the gentleman's fowl."

In point of quality, the birds exhibited appeared to us to be much superior to those of last year.

In our recent account of a visit to his poultry-yards at Knowsley, we took occasion to say, that he who should beat Captain Hornby in the *Spanish* classes, at Birmingham, must show good birds in their best form. We were not far wrong, for the Captain has certainly made a tolerably clean sweep of it in these classes, having carried off the first and second prizes (the latter, in our opinion, being the better

pen). In the *Spanish* chicken class, the first prize was awarded to Mr. J. O. Smith, of Skelton Grange, near York; and we think his birds well deserved the honour.

The next classes comprise the different varieties of the *Dorking* family; and we think the committee have taken a mistaken step in offering separate prizes for *Dorkings* with double or rose combs. Such, in our opinion, and in that of most of the best judges, so far as we have been able to collect them, are of questionable purity as *Dorking* fowls, and, at all events, are quite unworthy of separate premiums at such a show as that of Birmingham. The grey and sober plumage of the *Dorkings* presents an agreeable contrast to the more gay feathering of some of their competitors; and their peculiarly neat and "square" build points them out, as in truth they are, as the very fowl for the table. The advantage of the *Dorkings* is, that their meat is packed into a small compass, and, for the purposes of the cook alone, we are not sure that the *Dorking* does not bear away the palm from all competitors. But, taking all points together (and we may as well repeat that, in giving an opinion of the relative merits of different varieties, we have always in view the question—which of them combines the most good qualities with the fewest defects), we are of opinion that the *Shanghaes* and *Spanish* are superior to the *Dorkings*. In these, as in the *Spanish* classes, the number of pens was greater this year than last, and we think their contents at least equal in quality. The first prize in the principal class was awarded to T. T. Parker, Esq., of Sutton Grange, for a splendid pen of birds; the second falling to the lot of Captain Hornby, for one scarcely inferior to it.

We have already said that the general verdict of the poultry-keeping world has, in our opinion, in spite of the hue raised against them by the dealers, indisputably been pronounced in favour of the *Shanghaes*; and we think, taking all points into consideration, correctly so. In point of beauty, opinions may differ; but their great bulk, added to neat and compact appearance, their fecundity, and the ease with which they may be kept within any enclosure, however slight, renders them, without regard to other considerations, a most desirable fowl. Their very singularities—the stumpy tail and feathered leg—are not unpleasing by way of variety, and they are, moreover, quiet and gentle in habits and disposition to a degree. But, whether we be right or wrong in awarding to them, as we are at present disposed to do, the palm over all other varieties known in this country, certain it is that—for the present, at all events—they are the reigning favourites. The prices for which they have been, and are, sold; the length of time during which those enormous prices have been kept up; the interest concentrated upon them at every show we go to; prove, beyond cavil, that the fact is as we have stated. To this observation, their position at the Birmingham show was no exception. From day to day, and from hour to hour, the thickest of the crowd surrounded the pens containing the different sub-varieties of these beautiful birds. Since the last exhibition the *Shanghaes* have been divided into three classes—the whites, the cinnamons and buffs, and the browns and partridge-feathered. Why the greys and blacks have been excluded we are not aware. Taking the subdivisions in the order we have given, the white first claims our notice. Inferior in size to some of their relatives, yet upon a lawn, or in a clean country place, what can look prettier than a neat uniform lot of these beautiful birds? They have already become prime favourites, especially among the ladies, and, we think, are likely to continue so.

In this sub-division, which was superior, both in number and quality, to those shown in the same classes in 1851, the first prizes, both for old fowl and for chickens, were awarded to Mrs. Herbert, of Powick. The second prize for the old birds was given to Mr. G. C. Peters, of Moseley; and the third to Mr. George Graham, of Yardley, whose pen appeared to us, and to many others, to be at least equal to the other two.

Of the numerous shades of colour prevailing among the *Shanghae* fowl, none has become so popular as the neat and pretty *Kuff*; and certainly there is something peculiarly pleasing in its quiet uniformity. Whether from this or other causes we know not, but the buff has certainly commanded higher prices than those of any other colour. It is, therefore, not surprising that in this class the greatest

interest appeared to be centred—so much so, that it was really difficult to obtain time and space sufficient to get a good view of them. In every show the "observed of all observers," here, where the best of each sort are congregated together, we have a right to expect the best of these also. Hence the interest they excited, which was certainly by no means disappointed. In one word, we can say nothing for the buff class which has not been said and proved by the preference everywhere accorded to them, although we really do not think this class was so good, as a whole, as the corresponding class of last year.

With regard to the dark varieties, we are not of those who, on the one hand, decry them; nor do we, on the other, think them, as some do, either more hardy or superior in weight to their light-coloured relatives. In truth, we think there are equally fine kinds of the buff, the cinnamon, and the dark varieties; and we know that it is difficult to find chickens, of any breed, more easy to be reared than are the buff Shanghaes. For those who reside near large towns we might recommend the darker birds, on the ground that it is better to keep good birds of a colour which is not so easily soiled, than to have birds of better quality, yet of a shade so light that they cannot be kept, in that locality, in perfect purity of plumage.

Reverting to the prize-list, we find that in the buff class of older birds Mr. Sturgeon maintains his old position—a higher he cannot attain. Mr. Cattell, of Moseley Wake (green), obtained the second prize; and Mr. Steggall, of Weymouth, the third. In the corresponding class of young fowls of 1852, the first prize was awarded to Mr. Cattell; the second to Thomas Roscoe (Captain Hornby's servant); and the third to Mr. Punchard. It was to the awards in this latter class that the greatest exception was taken; and, after much examination, we are bound to declare our opinion in favour of the malcontents.

Prizes were also given for the best pair of buff, cinnamon, or brown: the first to Dr. Gwynne, of Sandbach; the second to Mr. Punchard; and the third to Mr. H. G. Smith. Mr. Punchard also obtained a commendation for what was thought by many the best pen of the four; and this opinion was partly borne out by the fact, that the pair of birds were sold for £25. We wish Mr. Punchard as good a sale on the 4th of January as that which Mr. Sturgeon was fortunate enough to secure.

The next class, in order, are the *Malays*. These have hitherto been a favourite fowl; and certainly there is a stateliness and an appearance of high-breeding about a true Malay which is particularly commanding. We cannot but regret that so handsome and pure a breed of fowls should, all at once, have become nearly extinct; although we must admit, that in point of utility they are not equal to the Cochins, the Spanish, or the Dorkings.

Next in order, come the type of courage—the old English *Game*. The days of cock-fighting are happily at an end in this country, but we can still admire the martial appearance and bearing of the different sub-varieties of those truly "game" birds which were wont, in old times, to contend in the cock-pit. For beauty and variety of plumage, closeness of feathers, and purposes of utility combined, there is, we really believe, no one of the smaller varieties of our domestic poultry preferable to the *Game*. In the northern counties, the pitmen and cottagers prefer them to all other sorts within their reach; and the degree of perfection to which they are brought, if not so great as in the times when fortunes and estates depended upon the result of their encounters, is still considerable. To us they are interesting, as one of the "poor man's fowls;" and sure we are that a cottager can keep none upon less food, or to greater advantage, while they will never shame the poultry-yard of a gentleman. For the numerous prizes awarded, we refer to the list which we subjoin; and we think we may say, without fear of contradiction, that the *Game* classes were the best in the exhibition.

The *Pencilled Hamburgh* next claim our attention. These, like the *Game*, are, though in different localities, the favourites of the cottagers. In the West Riding of Yorkshire and parts of Lancashire, there is scarcely a cottage which cannot boast of its few "*Chittaprats*," as they are there called. As they may not be known to many of our readers, we may add that there is not a prettier race of fowls extant than the

Pencilled Hamburghs, whether golden or silver—nor one, which, in proportion to its size, is of more real use to the farmer or the cottager. We cannot, however, say we think the collection of these pretty fowls was first rate. The golden were better than the silver ones—the latter, indeed, would not bear comparison with those exhibited at small shows in the Yorkshire towns.

Following naturally in order come the *Spangled Hamburghs*, called in Yorkshire, where they also are principally cultivated, "gold and silver pheasants." These, again, are beautifully feathered kinds; and, like the *Pencilled* varieties, capital layers; and, therefore, most useful to the poor man. Our Shanghaes and Spanish fanciers would scarcely suppose that their poorer brethren in Yorkshire will discuss the merits and demerits of their *Chittaprats*, or gold or silver pheasants, and point out, to a feather, the difference between them. With all the zest and interest which they themselves bestow upon their own more costly and gorgeous favourites. And were the judge, who, at one of the Yorkshire shows, should make a mistake in deciding between the pen of rivals, each as competent, or more so, to exercise a judgment as himself.

Of the *Polish* fowls, which are next in rotation, so much has been said of late, that, without meaning at all to disparage them, we shall not be at all surprised to find that some of our friends, who have purchased them of the dealers, may discover, before long, that they have got considerably less than their "pennyworth for their penny." Yet the *Polands*, of which there are several tolerably distinct varieties, are exceedingly pretty, and are, moreover, for their size, useful fowl. The plumage of the blacks, which almost equals that of the Spanish in brilliancy, is contrasted to advantage with the pretty white crest which is common to both sexes. The Golden and Silver *Polands* have the latter characteristic in the same perfection; and although the contrast between the black plumage and white crest does not hold good, it is more than made up for by the beautiful markings of the varieties now under notice. The *Polands* are, by the efforts of the dealers, rising in favour; and although we are not prepared to say that it is not deservedly so, yet we are sure that the prices which have been given for them are perfectly ridiculous, and such as never can be maintained. For the several prizes awarded, we refer to the list, only adding that the *Polands*, as a whole, are decidedly an improvement upon the last year's show, and added considerably to the interest of the exhibition.

Of the *Bantams*, generally one of the prettiest features of a large gathering like this, we shall only say that they were decidedly inferior in quality to those shown at many of the minor exhibitions.

We do not think that either the *Geese* or *Turkeys* were so good as those exhibited on former occasions.

Of *Ducks*, some good specimens were exhibited; and the *Aylesburies* shown by Lord Hill were well worthy of the first prize awarded to them, as were the *Rouens* of Mr. Charles Punchard, which, in their class, obtained a like premium.

Upon the whole, we do not hesitate to say that the Show of 1852 was not, in point of general merit, at all superior to its predecessor. We doubt if so many good birds were shown; and we are sure there were more of a decidedly inferior character. There are several reasons, combining probably, to produce this result. We have already adverted, not without pain, to some of them; and we submit, in conclusion, to the managers of future anniversaries, that the time for which the birds are kept is really too long. If one day was given up, so that the birds need not be brought in until the Monday evening, two days would be gained to them; and we hope and believe nothing would be lost to the exhibition or to the public. Sure we are that exhibitors would be better satisfied; and we are strongly inclined to think that the owners of many good birds, who now keep them at home, would, if this and the other objections to which we have, in no unfriendly spirit, thought it our duty to advert, were obviated, no longer object to send them to Birmingham. If the Show is to be kept up at all upon the scale it has already attained, to say nothing of improvement, most of these points must necessarily force themselves upon the attention of those in office. This is our only object in putting them forward; and we very sincerely trust that all

causes of jealousy and suspicion being removed, the subscribers will work harmoniously together; and that we may for many years look upon the Exhibition at Birmingham as a standard Poultry Show.

We publish the full prize-list, as follows:—

Class 1.—SPANISH.

(For the best Cock and three Hens of any age.)

5. First prize, 2*l.* 2*s.*, Mrs. Windham Hornby, Knowsley Cottage, Prescott.
3. Second ditto, 1*l.* 1*s.*, Captain Windham Hornby, Knowsley Cottage, Prescott.

Class 2.—SPANISH.

(For the best Cock and three Pullets, Chickens of 1852.)

25. First prize, 1*l.* 1*s.*, Mr. John Hill Smith-Skelton Grange, York.
33. Second ditto, 10*s.*, Mr. Richard Taylor, Ward End Mill.
27. Third ditto, 5*s.*, Captain Windham Hornby, Knowsley Cottage, Prescott.

The whole of this class highly meritorious.

Class 3.—SPANISH.

(For the best Cock and one Hen of any age.)

58. First prize, 15*s.*, Mr. John Henry Peck, Wigan.
56. Second ditto, 10*s.*, Mr. John Taylor, jun., Chesey House, Shepherd's Bush, London.

Class 4.—DORKING (Single-combed).

(For the best Cock and three Hens of any age.)

95. First prize, 2*l.* 2*s.*, Thomas Townley Parker, Esq., Sutton Grange, St. Helen's, Lancashire.
72. Second ditto, 1*l.* 1*s.*, Captain Windham Hornby, Knowsley Cottage, Prescott.

Class 5.—DORKING (Single-combed).

(For the best Cock and three Pullets, Chickens of 1852.)

109. First prize, 1*l.* 1*s.*, Captain Windham Hornby, Knowsley Cottage, Prescott.
113. Second ditto, 10*s.*, Mr. James Drewry, Newton Mount, Burton-upon-Trent.
119. Third ditto, 5*s.*, Mr. Edward Lister, Cassia Lodge, near Over, Cheshire.

The whole class highly commendable.

Class 6.—DORKING (Double or Rose-combed).

(For the best Cock and three Hens of any age.)

139. First prize, 2*l.* 2*s.*, Miss Elizabeth Steele Perkins, Sutton Coldfield.
141. Second ditto, 1*l.* 1*s.*, Mr. John Huskins, Wilnecote, near Fazeley, Staffordshire.
138. Third ditto, 15*s.*, The Reverend John Robinson, Widmerpool, near Nottingham.

Class 7.—DORKING (Double or Rose-combed).

(For the best Cock and three Pullets, Chickens of 1852.)

148. First prize, 1*l.* 1*s.*, Mrs. Windham Hornby, Knowsley Cottage, Prescott.
146. Second ditto, 10*s.*, Sir John Cathcart, Bart., Cooper's Hill, Chertsey, Surrey.
150. Third ditto, 5*s.*, Mr. James Drewry, Newton Mount, Burton-upon-Trent.

Class 8.—DORKING (Double or Single-combed).

(For the best Cock and one Pullet, Chickens of 1852.)

163. First prize, 15*s.*, Mrs. Windham Hornby, Knowsley Cottage, Prescott.
175. Second ditto, 10*s.*, The Reverend M. W. F. Thursby, Abington Rectory, near Northampton.

Class 9.—DORKING (White).

(For the best Cock and three Hens of any age.)

188. First prize, 2*l.* 2*s.*, The Right Honourable the Earl of Dartmouth, Sandwell.
194. Second ditto, 1*l.* 1*s.*, Mr. Joseph Jennens, Moseley, Birmingham.
Third prize withheld.

Class 10.—DORKING (White).

(For the best Cock and three Pullets, Chickens of 1852.)

205. First prize, 1*l.* 1*s.*, Mr. John Brasley Payn, Vicarage Road, Edgbaston.
200. Second ditto, 10*s.*, The Right Honourable the Earl of Dartmouth, Sandwell.
202. Third ditto, 5*s.*, The Reverend Edward Elmhirst, Shawell Rectory, Leicestershire.

Class 11.—COCHIN-CHINA (Cinnamon and Buff).

(For the best Cock and three Hens of any age.)

225. First prize, 2*l.* 2*s.*, Mr. Thomas Sturgeon, Manor House, Grays, Essex.
212. Second ditto, 1*l.* 1*s.*, Mr. James Cattell, Moseley Wake Green, near Birmingham.
224. Third ditto, 15*s.*, Mr. F. C. Steggall, Weymouth, Dorsetshire.

Class 12.—COCHIN-CHINA (Cinnamon and Buff).

(For the best Cock and three Pullets, Chickens of 1852.)

294. First prize, 1*l.* 1*s.*, Mr. James Cattell, Moseley Wake Green, near Birmingham.
273. Second ditto, 10*s.*, Mr. Thomas Roscoe, Knowsley, near Prescott.
278. Third ditto, 5*s.*, Mr. Charles Punchard, Blunt's Hall, Haverhill, Suffolk.

Class 13.—COCHIN-CHINA (Brown, and Partridge-feathered).

(For the best Cock and three Hens of any age.)

335. First prize 2*l.* 2*s.*, Mr. Edward Farmer, Greet, Sparkbrook, near Birmingham.
339. Second ditto, 1*l.* 1*s.*, Mr. Thomas Atkins, Dursley, Gloucestershire, and Babbicombe, Torquay, Devonshire.
332. Third ditto, 15*s.*, Mr. Thomas Smith, Chesapeake, Birmingham.

Class 14.—COCHIN-CHINA (Brown, and Partridge-feathered).

(For the best Cock and three Pullets, Chickens of 1852.)

361. First prize, 1*l.* 1*s.*, Mr. Thomas Atkins, Dursley, Gloucestershire, and Babbicombe, Torquay, Devonshire.
355. Second ditto, 10*s.*, Mr. Charles Punchard, Blunt's Hall, Haverhill, Suffolk.
349. Third ditto, 5*s.*, George Tollet, Esq., Betley Hall, Staffordshire.

Class 15.—COCHIN-CHINA (Cinnamon and Buff, or Brown).

(For the best Cock and one Pullet, Chickens of 1852.)

406. First prize, 15*s.*, William Cusl Wynne, Esq., M.D., Sandbach, Cheshire.
408. Second ditto, 10*s.*, Mr. Charles Punchard, Blunt's Hall, Haverhill, Suffolk.

Class 16.—COCHIN-CHINA (White).

(For the best Cock and three Hens of any age.)

452. First prize, 2*l.* 2*s.*, Mrs. Herbert, Powick, Worcestershire.
458. Second ditto, 1*l.* 1*s.*, Mr. George Charlton Peters, Moseley, near Birmingham.
455. Third ditto, 15*s.*, Mr. George Graham, Yardley, Worcestershire.

Class 17.—COCHIN-CHINA (White).

(For the best Cock and three Pullets, Chickens of 1852.)

465. First prize, 1*l.* 1*s.*, Mrs. Herbert, Powick, Worcestershire.
470. Second ditto, 10*s.*, Mr. George Graham, Yardley, Worcestershire.
479. Third prize, 5*s.*, Mr. James Cattell, Moseley Wake Green, near Birmingham.

The Judges cannot too strongly impress on the exhibitors of Cochinchina fowls the danger they incur of losing prizes, to which they would otherwise be entitled, by exhibiting specimens with imperfect tails.

Class 18.—MALAY.

(For the best Cock and three Hens of any age.)

482. First prize, 1*l.* 1*s.*, Mr. Charles Ballance, 5, Mount Terrace, Taunton, Somersetshire.

Second and third prizes withheld.

Class 19.—MALAY.

(For the best Cock and three Pullets, Chickens of 1852.)

489. First prize, 15*s.*, Mr. Gervase Oldham, Nether Whitacre, Warwickshire.
488. Second ditto, 10*s.*, Mr. Charles Ballance, 5, Mount Terrace, Taunton, Somersetshire.

Third prize withheld.

Class 20.—GAME FOWL (White, and Piles).

(For the best Cock and three Hens of any age.)

495. First prize, 1*l.* 1*s.*, Mr. Henry Felthous, Tamworth.
510. Second ditto, 15*s.*, Mr. Theodore Bullock, Hawthorn House, Handsworth.
502. Third ditto, 10*s.*, Mr. J. T. Wilson, Redditch, Worcestershire.

Class 21.—GAME FOWL (White, and Piles).

(For the best Cock and three Pullets, Chickens of 1852.)

527. First prize, 15*s.*, Mr. James Hand, jun., Amington Old Hall, near Tamworth.
523. Second ditto, 10*s.*, Mrs. G. A. Wilson, Redditch, Worcestershire.
518. Third ditto, 5*s.*, Mr. Edward Lowe, Comberford Mill, near Tamworth.

Class 22.—GAME FOWL (Black-breasted, and other Reds).

(For the best Cock and three Hens of any age.)

544. First prize, 1*l.* 1*s.*, Mr. Edward Lowe, Comberford Mill, near Tamworth.
548. Second ditto, 15*s.*, Mr. Edward Glover, Olton Green, near Solihull.
550. Third ditto, 10*s.*, Mr. Benjamin Williams, Loxley, Handsworth.
The whole class commended.

Class 23.—GAME FOWL (Black-breasted, and other Reds).

(For the best Cock and three Pullets, Chickens of 1852.)

588. First prize, 15*s.*, Mr. Theodore Bullock, Hawthorn House, Handsworth.
591. Second ditto, 10*s.*, Mr. Henry Sewell, Upton-upon-Severn, Worcestershire.
596. Third ditto, 5*s.*, Mr. Thomas Roscoe, Knowsley, near Prescott.

Class 24.—GAME FOWL (Blacks, and Brassy-winged, except Greys).

(For the best Cock and three Hens of any age.)

622. First prize, 1*l.* 1*s.*, Mr. J. T. Wilson, Redditch, Worcestershire.
628. Second ditto, 15*s.*, The Reverend Charles D. Blyth, Sutton Rectory, Biggleswade.
620. Third ditto, 10*s.*, Mr. J. T. Wilson, Redditch, Worcestershire.

Class 25.—GAME FOWL (Blacks, and Brassy-winged, except Greys).

(For the best Cock and three Pullets, Chickens of 1852.)

631. First prize, 15*s.*, Mr. William Doster, Seckington.
Second and third prizes withheld.

Class 26.—GAME FOWL (Duck-wings, and other Greys, and Blues).

(For the best Cock and three Hens of any age.)

633. First prize, 1*l.* 1*s.*, Mr. William H. Austin, Norton, near Shifnal, Shropshire.

662. Second ditto, 15s., Mr. Edward Lowe, Comberford Mill, near Tamworth.

646. Third ditto, 10s., Mr. John Hadwen, Kelroyd Bridge, Halifax.

Class 27.—GAME FOWL (Duckwings, and other Greys, and Blues.)
(For the best Cock and three Pullets, Chickens of 1852.)

648. First prize, 15s., Isaac Avery, King's Norton, Worcestershire.

650. Second ditto, 10s., Mr. Francis Bullock, Hawthorn House, Handsworth.

655. Third ditto, 5s., Mr. William Smith, Kent House, Halifax.

Class 28.—GOLDEN-PENCILLED HAMBURGH.

(For the best Cock and three Hens of any age.)

662. First prize, 11. 1s., Mr. John Royston Pearson, Chilwell, near Nottingham.

661. Second ditto, 15s., Mr. John Lowe, 6, Bull Ring, Birmingham.

659. Third ditto, 5s., Mr. W. B. Mapplebeck, 6, Bull Ring, Birmingham.

Class 29.—GOLDEN-PENCILLED HAMBURGH.

(For the best Cock and three Pullets, Chickens of 1852.)

668. First prize, 15s., Mr. James Oldham, Long Eaton, Derbyshire.

660. Second ditto, 10s., Mr. John Lowe, 6, Bull Ring, Birmingham.

665. Third ditto, 5s., Mr. Charles Brown, 47, Edgbaston Street, Birmingham.

Class 30.—GOLDEN-SPANGLED HAMBURGH.

(For the best Cock and three Hens of any age.)

677. First prize, 11. 1s., Mr. Henry Clapham, Aireworth, near Keighley, Yorkshire.

680. Second ditto, 15s., Mr. James Dixon, Westbrook Place, Bradford, Yorkshire.

671. Third ditto, 5s., Mr. Thomas Smith, Brineton, near Shiffnal.

Class 31.—GOLDEN-SPANGLED HAMBURGH.

(For the best Cock and three Pullets, Chickens of 1852.)

692. First prize, 15s., Mr. Henry Clapham, Aireworth, near Keighley, Yorkshire.

686. Second ditto, 10s., Mr. Thomas Smith, Brineton, near Shiffnal.

Third prize withheld.

Class 32.—SILVER-PENCILLED HAMBURGH.

(For the best Cock and three Hens of any age.)

697. First prize, 11. 1s., The Honourable Mrs. Astley, Swanton House, Thetford, Norfolk.

700. Second ditto, 15s., Mr. Benjamin Dain, Slade House, Aston, Birmingham.

698. Third ditto, 5s., The Right Honourable Viscount Hill, Hawkestone, Salop.

Class 33.—SILVER-PENCILLED HAMBURGH.

(For the best Cock and three Pullets, Chickens of 1852.)

743. First prize, 15s., Mr. Benjamin Dain, Slade House, Aston, Birmingham.

748. Second ditto, 10s., Mr. Thomas Lowe, Whateley, near Fazeley, Staffordshire.

740. Third ditto, 5s., Mr. David Groom, Burliah, Stourport, Worcester-shire.

Class 34.—SILVER-SPANGLED HAMBURGH.

(For the best Cock and three Hens of any age.)

783. First prize, 11. 1s., Mr. T. B. Wright, Great Barr, Staffordshire.

780. Second ditto, 15s., Mr. A. F. Sparks, Bridgnorth, Shropshire.

767. Third ditto, 10s., Mr. William Beach, Vine Inn, Monument Lane, Birmingham.

Class 35.—SILVER-SPANGLED HAMBURGH.

(For the best Cock and three Pullets, Chickens of 1852.)

804. First prize, 15s., Mr. James Whilock, 15, High-street, Birmingham.

787. Second ditto, 10s., Charles Robert Colville, Esq., M.P., Lullington, near Burton-upon-Trent.

816. Third ditto, 5s., Mr. Henry Clapham, Aireworth, near Keighley, Yorkshire.

Class 36.—POLAND FOWL (Black, with White Crests).

(For the best Cock and three Hens of any age.)

828. First prize, 11. 1s., Mr. Edward Bird Guest, Ivy House, Broadwas, Worcestershire.

825. Second ditto, 15s., Mr. Edward Hewitt, Eden Cottage, Sparkbrook, Birmingham.

823. Third ditto, 10s., Mr. Edward Hewitt, Eden Cottage, Sparkbrook, Birmingham.

Class 37.—POLAND FOWL (Black, with White Crests).

(For the best Cock and three Pullets, Chickens of 1852.)

831. First prize, 15s., Miss Martha Hewitt, Eden Cottage, Sparkbrook, Birmingham.

842. Second ditto, 10s., Mr. Edward Collins, 124, Moismd-street, Birmingham.

837. Third ditto, 5s., Mr. Henry Child, jun., Sgerbourne Road, Balsall Heath, Birmingham.

Class 38.—POLAND FOWL (Golden, with Ruffs or Beards).

(For the best Cock and three Hens of any age.)

843. First prize, 11. 1s., Mr. John Edwards Mapplebeck, Highgate, Birmingham.

847. Second ditto, 15s., W. G. Vivian, Esq., Singleton, Glamorganshire.

848. Third ditto, 10s., John Ault, Brailsford, near Derby.

Class 39.—POLAND FOWL (Golden, with Ruffs or Beards).

(For the best Cock and three Pullets, Chickens of 1852.)

850. First prize, 15s., Mr. Daniel J. Fleetwood, 53, Ash-street, Birmingham.

851. Second ditto, 10s., Mr. John Edwards Mapplebeck, Highgate, Birmingham.

857. Third ditto, 5s., Master Godfrey Horner, Charlotte-street, Hull.

Class 40.—POLAND FOWL (Golden, without Ruffs or Beards).

(For the best Cock and three Hens of any age.)

861. First prize, 11. 1s., Mr. William Cox, Brailsford Hall, near Derby.

862. Second ditto, 15s., James Winter, Brailsford, Derbyshire.

868. Third ditto, 10s., Mr. William Cox, Brailsford Hall, near Derby.

Class 41.—POLAND FOWL (Golden, without Ruffs or Beards).

(For the best Cock and three Pullets, Chickens of 1852.)

865. First prize, 15s., Mr. Edward Farmer, Greet, Sparkbrook, near Birmingham.

867. Second ditto, 10s., Mr. Edward Farmer, Greet, Sparkbrook, near Birmingham.

No third prize.

Class 42.—POLAND FOWL (Silver, with Ruffs or Beards).

(For the best Cock and three Hens of any age.)

868. First prize, 11. 1s., W. G. Vivian, Esq., Singleton, Glamorganshire.

871. Second ditto, 15s., John Ault, Brailsford, near Derby.

No third prize.

Class 43.—POLAND FOWL (Silver, with Ruffs or Beards).

(For the best Cock and three Pullets, Chickens of 1852.)

872. First prize, 15s., Mr. Daniel J. Fleetwood, 53, Ash-street, Birmingham.

874. Second ditto, 10s., Master Godfrey Horner, Charlotte-street, Hull.

873. Third ditto, 5s., John Ault, Brailsford, near Derby.

Class 44.—POLAND FOWL (Silver, without Ruffs or Beards).

(For the best Cock and three Hens of any age.)

878. First prize, 11. 1s., Mr. Theodore Bullock, Hawthorn House, Handsworth.

876. Second ditto, 15s., Mr. Thomas Robson, Heath Hall, near Halifax.

884. Third ditto, 10s., Master Godfrey Horner, Charlotte-street, Hull.

Class 45.—POLAND FOWL (Silver, without Ruffs or Beards).

(For the best Cock and three Pullets, Chickens of 1852.)

887. First prize, 15s., Mr. Thomas Robson, Heath Hall, near Halifax.

886. Second ditto, 10s., Mr. George Parker, Perry Barr, Staffordshire.

No third prize.

Class 46.—FOR ANY OTHER DISTINCT BREED.

CUCKOO.

891. Prize, 11. 1s., The Right Honourable Lady Guernsey, The Bury, near Leamington.

POLAND.

902. Prize, 15s., W. G. Vivian, Esq., Singleton, Glamorganshire.

RUMPLES.

905. Prize, 15s., Mr. Thomas Beetonson, Vauxhall Grove, Birmingham.

COCHIN-CHINA.

917. Prize, 15s., John Fairlie, Esq., Cheveley Park, near Newmarket, Cambridgeshire.

928. Prize, 10s., Mr. T. B. Wright, Great Barr, Staffordshire.

FRIZZLED.

924. Prize, 10s., Mr. Theodore Bullock, Hawthorn House, Handsworth.

NEGRO, OR SILKY.

930. Prize, 11. 1s., Mr. Jonathan Harlow, Moseley, near Birmingham.

ANDALUSIAN.

935. Prize, 15s., Mr. John Taylor, jun., Creamy House, Shepherd's Bush, London.

Class 47.—BANTAMS.

(For the best Cock and two Hens.)

GOLD-LACED.

957. First prize, 15s., Captain Clement Delves Hill, Summerhill, Newport, Shropshire.

953. Second ditto, 10s., Mrs. Hosier Williams, Eaton Mascott, near Shrewsbury.

SILVER-LACED.

968. First prize, 15s., Mr. Thomas Roscoe, Knowsley, near Prescott.

985. Second ditto, 10s., Mr. Edward Hewitt, Eden Cottage, Sparkbrook, near Birmingham.

WHITE.

996. First prize, 15s., Mr. Benjamin Dain, Slade House, Ashton, Birmingham.

994. Second ditto, 10s., Mr. Richard Bratton Baddeley, Wellington, Shropshire.

BLACK.

1005. First prize, 15s., Mr. John Dain, Henley-in-Arden.

1003. Second ditto, 10s., Mr. Matthew Ridgway, Dewsbury.

ANY OTHER VARIETY.

1017. First prize, 15s., Mr. C. Amaden, Lichfield.

No second prize.

Class 48.—PIGEONS.

CARRIERS.—1019. First prize, 7s. 6d., Mr. Edward Barber, Monk's Path, Shirley Street, near Birmingham. 1024. Second ditto, 5s., Mr. Samuel Ridley, jun., Brighton. 1026. Commended, Mr. Edward Barber, Monk's Path, Shirley Street, near Birmingham.

ALMOND TUMBLER.—1038. First prize, 7s. 6d., Mr. George Parker, Perry Barr, Staffordshire. 1035. Second ditto, 5s., Mr. William Curtis, High Street, West Bromwich.

OTHER TUMBLERS.—1039. First prize, 7s. 6d., Mr. John Percival, 1, Belgrave Place, Bristol Road, Birmingham.

OWL.—1044. First prize, 7s. 6d., Miss Sarah Mary Beetonson, Vauxhall Grove, Birmingham. 1043. Second ditto, 5s., Miss Sarah Mary Beetonson, Vauxhall Grove, Birmingham.

NUN.—1046. First prize, 7s. 6d., Mr. Charles Tovey, Waterloo Place, Bloomsbury, Birmingham. 1048. Second ditto, 5s., Mr. Josiah Chune, Coalbrookdale, Shropshire.

TURBIT.—1051. First prize, 7s. 6d., Mr. Joshua Hopkins, 39, Dale End, Birmingham.

JACOBINE.—1059. First prize, 7s. 6d., Mr. John Amphlet, Walsall. 1057. Second ditto, 5s., Mr. John Dugard, Finch Street, Handsworth.

FANTAIL.—1067. First prize, 7s. 6d., Mr. Thomas Beetonson, Vauxhall Grove, Birmingham. 1068. Second ditto, 5s., Mr. James Steen Harvey, 34, Aston Street, Birmingham.

TRUMPETER.—1076. First prize, 7s. 6d., Mr. Joshua Hopkins, 39, Dale End, Birmingham. 1074. Second ditto, 5s., Mr. W. H. Goddard, Hagley Road, Edgbaston.

POUTER, OR CROPPER.—1079. First prize, 7s. 6d., Mr. William Curtis, High Street, West Bromwich.

BABE.—1083. First prize, 7s. 6d., Mr. Joshua Hopkins, 39, Dale End, Birmingham.

RUNT.—1089. First prize, 7s. 6d., Mr. George C. Adkins, Edgbaston. 1090. Second ditto, 5s., Mr. John Hill, Vincent Street, Balsall Heath.

DRAGON.—1097. First prize, 7s. 6d., Mr. Samuel Ridley, Junr., Brighton. 1095. Second ditto, 5s., Mr. Edward Barber, Menk's Path, Shirley Street.

OTHER VARIETIES.—No prizes awarded.

Class 49.—GEESE.

1120. First prize, 11. 1s., Mrs. H. Hill, New House, Stretton Grandison, Herefordshire. 1107. Second ditto, 10s., Mr. John Taylor, junr., Cressy House, Shepherd's Bush, London. 1119. Third ditto 5s., Thomas Townley Parker, Esq., Sutton Grange, St. Helen's, Lancashire.

Class 50.—DUCKS.

AYLESBURY.—1127. First prize, 11. 1s., The Right Honourable Viscount Hill, Hawkstone, Salop. 1137. Second ditto, 10s., Miss Rachel Walker, Clifton Rectory, Northamptonshire. 1148. Third ditto, 5s., Mr. Joseph Jennens, Moseley, near Birmingham. The class generally commended.

ROVEN.—1167. First prize, 11. 1s., Mr. Charles Punchard, Blunt's Hall, Haverhill, Suffolk. 1164. Second ditto, 10s., Mr. H. Worrall, Knotty Ash House, near Liverpool. No third prize.

AND OTHER VARIETIES.—1172. First prize 11. 1s., Miss Clifton, Whittington, near Worcester. 1173. Second ditto, 10s., Sir John Cathcart, Bart., Cooper's Hill, Chertsey, Surrey. 1175. Third ditto, 5s., Mr. John Shackel, Blenheim House, Small Heath, near Birmingham.

MUSCOVY.—1184. Prize, 10s., Mr. Thomas Snape Tunaley, Milfield, near Tamworth.

Class 51.—TURKEYS.

1217. First prize, 11. 1s., John Fairlie, Esq., Cheveley Park, near Newmarket, Cambridgeshire. 1211. Second ditto, 10s., Mr. William Udall, Green Lanes, near Birmingham. 1196. Third ditto, 7s. 6d., The Right Honourable the Countess Howe, Gopsall Hall. The class generally good.

Class 52.—GUINEA FOWL.

1220. First prize, 11. 1s., Mr. William Masfen, Norton Caines, near Cannock. No second prize.

Judges of Poultry.—The Hon. and Rev. Stephen Willoughby Lawley, Enrick Rectory, near York; G. B. Andrews, Esq. Dorchester; The Rev. Robert Pulleine, the Rectory, Kirby Winke, near Thirsk; Mr. John Baily, Mount-street, Grosvenor-square, London.

Judges of Pigeons.—Mr. T. L. Parker, Birmingham; Mr. Hale, Handsworth.

DISEASES OF POULTRY.—No. 2

BROKEN LIMBS.

IN accordance with your desire, I shall be happy to disseminate, as far as my opportunities will allow, the various diseases of poultry. I believe that this can only be advantageously done by a close observance of symptoms during and an attentive examination after death. Situated as I am, with but a small number of fowls, and those in circumstances calculated to promote health, I am not likely to have, from my own stock, many subjects for investigation; I should, therefore, feel obliged to any of your readers who would supply me with patients as soon as I can make the requisite arrangements for opening my poultry hospital. I must beg of them, however, to follow the usual course in such cases, viz., to send me a letter of introduction previously, otherwise their protégés might arrive when the wards were overflowing, and all the beds in the hospital occupied. This would be more especially requisite, as, in any contagious diseases, it would be important, in the highest degree, to keep the birds separate. Should the patients die, I should make post mortem examination in

every case. On the contrary, should they recover under the treatment pursued, I should be most happy to return them to their owners.

In the meantime, I may say a few words respecting the treatment of broken bones. Fractures of the bones of the body are less likely to occur in birds than in other animals, inasmuch as the framework of the body is more completely united together, and is protected from injury by the feathers. In cases where fracture of the ribs, or other bones, may be suspected, there would be great difficulty in determining the nature of the injury, and I do not think anything more could be done than keeping the bird quiet until recovery.

In cases of broken wings, the quill feathers would prevent any recourse being had to ordinary bandaging. The plan I should pursue, would be to tie carefully the ends of some of the quills together in their natural position, with the wing closed; this would prevent motion of the broken ends of the bones, and to keep the bird in an empty place, where there could be no perch, or other substance, for it to attempt to fly upon.

Fracture of the fleshy part of the leg would be less manageable, and I can hardly recommend any bandaging that would be readily applied. The most common fracture in fowls is that of the naked part of the leg. This is usually treated by wrapping a slip of rag round the injured limb, and tying it with thread—a very imperfect plan, as motion of the broken bones is not prevented, and which is, therefore, frequently unsuccessful in its results. I should recommend a modification of what is known to surgeons as a gum splint. Let the white of an egg be well-beaten up with a fork, and spread upon a strip of thick, soft, brown paper, as wide as can be conveniently wrapped around the broken limb. The fowl should be held by an assistant; the leg slightly stretched, so as to bring the ends of the bones in a straight line; the moistened paper should be wrapped smoothly round several times, and secured by two or three turns of thread; and, lastly, to prevent the parts being moved before the paper has become dry and stiff, a thin splint of wood, such as is used for lighting pipes, may be bound with thread on each side; the wood might be removed the following day, as it then would add only to the weight, without increasing the advantage of the contrivance, which acts by preventing all motion, and so places the limb in the best possible condition for a union to take place.

Splints of this kind are of great value in human surgery, and several modifications of them exist; they are sometimes formed of gutta percha, softened by heat, or by leather, softened by hot water, or by tow and gum, lint and starch, &c.; but I do not think any so applicable to poultry as I have recommended, as the materials are always at hand, and, what is a matter of great importance, can be applied immediately after the accident.—W. B. TUNNICLIFFE, Tottenham, Middlesex.

HARDIHOOD OF PLANTS AT CLOYNE, IN IRELAND.

MANY thanks for your information relative to *Veronica speciosa*. My plant of it is but a rooted cutting of July last; but, a fortnight since, I saw the parent plant in full luxuriance, in front of a south wall, in a garden near Kilmallock, in the county Limerick, and without any protection whatever. Is *Veronica Jacquini* *delicata* similarly hardy, as I have a small plant out? [*Yes*] *decussata* I know is not.

It may interest you to know what plants are still (Dec. 6th) standing in good health out-of-doors here, at least, in my small garden—*Salvia fulgens* and *Grahamii*. The *Patens*, also, has not yet died down. *Escallonia rubra*, *Lophospermum*, and *Calumbilla scabra* (the latter has borne so much seed that I would gladly exchange it with any one who wished for it); a mixed bed of *Verbenas*, principally scarlet (*Defiance*), also seem in great strength; and near them some *Alonsoas* and *Cypreas*. The *Iris* and scarlet *Gladioli* are all springing up. The *Calla Ethiopica* is in great luxuriance, from the recent rains.—Rev. R. M. E.

VISITS TO SOME OF THE CHIEF POULTRY YARDS IN ENGLAND.—No. 5.

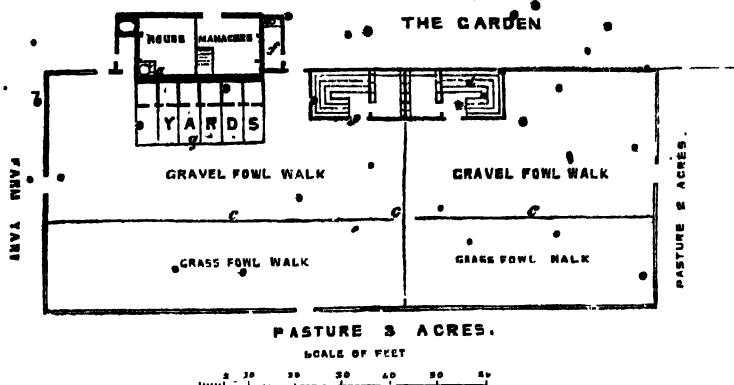
(MR. PUNCHARD'S.)

"BLUNT'S HALL," the hospitable residence of Mr. Punchard, is situated at the extreme western part of the county of Suffolk, about a mile from the little market town of Haverhill, once famed for its manufactory of checks, cottons, and fustians.

For his poultry, Mr. Punchard has two establishments, one at Blunt's Hall, and another at an off-farm, at about half-a-mile distant. The accommodation afforded the poultry in each place is much the same. Mr. Punchard confines himself entirely to two kinds, namely, Cochins-Chinas, and Ducks of the Rouen and Aylesbury breed. Of the Cochins,

or Shanghaes, by which name, I suppose, we shall soon be obliged to distinguish them, he has from about five to six hundred, all of the purest breed, bred by himself, and chiefly, I believe, from imported birds. In a corner, I observed a few pairs, very recently from Shanghae, which he has not yet had time to breed from. In respect to colour, the different shades of buff very much preponderate over the brown and partridge; but, in my opinion, breeders have dwelt too much on colour, the brown and partridge being less esteemed, but, as far as my experience has led me, they are the largest birds, and produce the greatest weight of eggs.

The accompanying sketch will serve to give a pretty correct idea of the accommodation afforded by Mr. Punchard to his fowls, and may be interesting to many of the readers of THE COTTAGE GARDENER.



a This copper heats the chicken houses by hot-water pipes during the winter, which can be extended to the roost and nest houses.

b Wall four feet high.

c Wire fence three feet high.

d Perches arranged in a sloping form.

e Windows running on cast-iron rollers, the openings being wired inside to admit air at pleasure.

f Ventilators with moveable louver boarding. A perforated zinc tube from each end of the building communicates with the ventilator and gives any degree of coolness. In winter they are closed. The roof of this building is slate nailed on boarding.

g Space pale fencing.

As regards feeding, I observed that the fowls are never without a supply of food, which consists of a mixture of wheat, crushed barley, and peas. The feeding-troughs are upon the same principle as the hopper of a mill. The trough itself is five feet long, and three or four inches deep, and, as the fowls take the food from the trough, it is supplied from a reservoir above, which holds two or three bushels, the supply being alike on both sides, making together a length of ten feet in each feeder. Fresh water is supplied to them every morning in Bailey's registered fountains. An air of the most perfect cleanliness pervades every part of the above; the sleeping-places being cleaned out every morning, and fresh dry gravel or sand strewed upon the floors. Considering the very great attention given by Mr. Punchard in selecting his fowls for breeding, I need hardly say, that their progeny is first-rate, and that amongst the brown and partridge, as well as the buffs, there are a number of birds of exquisite symmetry and form. And in this I am borne out by the opinion of a gentleman from the west of England, who is one of our greatest amateur breeders, whom I consider myself most fortunate in meeting at Blunt's Hall. The birds, about two hundred in number, selected by Mr. Punchard for his forthcoming auction, which I hear will take place on Tuesday, the 4th of January, at Mr. Stevens's (Great-room, King-street, Covent-garden, are, as a whole, a selection of a very choice and superior kind.—J. H. P.

[Another excellent judge of poultry has also favoured us with the following notes upon Mr. Punchard's poultry establishment.]

Many, in Mr. Punchard's situation, would have been content with the laurels won at Birmingham in 1850, and thought but little of acquiring other Shanghae stock beyond what had been so triumphant on that occasion. Not so with him, however; for, carrying out the true principles on which alone excellence in poultry, or any other stock, can be maintained, several importations of fresh birds from the northern parts of China have been selected for him by

intelligent correspondents, and been added to his collection at Blunt's Hall.

"An imported bird" is now a common term, especially in advertisements, to denote some specimen of new and great excellence, and of increased value. The accuracy of this we greatly doubt; for, hitherto, no recently-imported specimen has come before us equal to the occupants of many a pen at any of our recent exhibitions. Mr. Sturgeon's observations led to the same conclusions as we have ourselves formed, from what has happened in Mr. Punchard's, and some other cases. It is precisely the same with other fowls, and with Spanish, perhaps, particularly; for we know of more than one instance wherein poultry-keepers, desiring to shine with especial lustre in that beautiful class, have had large consignments from Spain, at considerable cost, without in the remotest degree increasing their chances of success. Whether Europe or Asia be their locality, the habits of poultry are identical, and mongrolism is found predominant. How zealously do we guard against it in our own well-wired yards; and how needful is our watchfulness. Thus, wherever similar precautions are altogether neglected, we must always have a large number to select from, where purity of race, and excellence in colour and form, are the objects of our ambition: and not even then must we calculate on success.

Mr. Punchard, therefore, deserves our best thanks for continuing what becomes a very expensive, however necessary a practice; for, if one bird in twelve possesses points of sufficient merit to warrant its introduction into our yard, the cost of the other eleven must be added, and this is, probably, a favourable estimate. We can only hope, therefore, that the now rapidly-increasing numbers of poultry-keepers will have the sound sense and discretion to select stocks from such a source as Mr. Punchard's, and of those other breeders who, like him, disregard cost, that the most perfect specimens of the Shanghae breed, from their native country, may gradually effect improvement in those few points, where the best English-bred birds may be

thought capable of it. If any be bold enough to say, we can have nothing better than some of those birds that have been shown in the course of the present year, we will not argue with him on what must be, as yet, an open question; but only add, that we must, for a time at least, import, that what we now have may be maintained at its present pitch of excellence, and suffer no deterioration. Some chicks of a week old had been hatched from those last imported; their downy covering varied in every tint from brown to white; and if, in spite of Mr. Punchard's care, a Suffolk winter checks their growth, they will be a useful guide for the matrimonial projects of next spring. A cock and hen were here of dark Vandyke brown, almost a self-colour, so far, at least, as we could judge; the birds being in severe moult; in lighter birds, the imported specimens, both here and elsewhere, have generally somewhat more of mottling than is commonly liked. A bamboo coop, in the corner of the yard, was their residence during the voyage; it must have been a narrow residence, and far from convenient. Importers would do well to insist on coops of sufficient height to allow the birds full room to stand upright; and the bars on which they stand should always be parallel to the front. How otherwise they escape deformity in the feet is a matter of wonder.

In one of Mr. Punchard's yards, eighty-five cockerels, in another sixty-five, produced a perfect blaze of colour, from which every tint might be selected. The birds were in admirable condition, and did full justice to the liberality that had awarded them so comfortable an abode, and so liberal a diet; but our eye searches in vain for the beautiful bird that was shown at Winchester; for his rich golden hackle, and glowing buff body colour, no less than his form and carriage, however closely imitated, is not fully attained by any of his relations now before us. We must find him, however, and Mr. Punchard kindly takes us where he appears in company with sundry brothers and cousins, each in a separate basket. Do you ask why? We will tell you. They are undergoing the penance for having appeared in public; for, however peaceable and contented their eighty-five relations may live together, whenever any of them are separated, though only for a few days, their return does not seem anyways pleasing to those who have not enjoyed the same excitement, and the admiration of the public; and this dissatisfaction is sometimes forcibly illustrated.

Mr. Punchard's name is often exclusively associated with the partridge-coloured birds that he has brought to such excellence; but, desiring to have the Shanghai race fully represented in every branch, his yard now numbers specimens of the fawn and buff birds that would do credit to the most skillful breeding. As regards the former, we might search in vain for better than those shown by Mr. Punchard at Winchester, and destined, we hope, for a similar victory at Birmingham. Mr. Punchard's arrangement of the yards and poultry is on a large scale, and most complete in all its detail; for, besides the gravelled court, each lot has the run of a young shrubbery and an acre or so of pasture. Fowls, indeed, were never better housed and cared for in all their wants. Were we lucky enough to have the same conveniences for our birds, we should make but one alteration, and that would be doing away with brick floors, which retain moisture, and consequently lower the temperature, and substitute the chalk, which is abundant in the neighbourhood. The advantage of grinding a large portion of the corn used for the fowls is here evidenced in a striking manner; and Mr. Punchard having a mill attached to his farm is, doubtless, enabled to practice such judicious economy in respect of feeding as the possession of a flock of upwards of six hundred birds must render necessary.

The aspect of the site of Mr. Punchard's different poultry yards and houses was against him; but admirably has he remedied this objection: and a Newmarket racing-stable can hardly boast of more considerations for the wants, and more caution, for the health of its inmates, than are evinced in the plan and execution of his poultry buildings at Blunt's Hall.

The kindness of Mr. Punchard, in affording the fullest information on every point to all inquirers, must have led many to profit by his hospitality and experience. And as a large portion of his present stock are destined for the

auctioneer's hammer, not only those who have already seen for themselves, but poultry-keepers of every degree, will do well to take that opportunity of ascertaining how far their own favourites may be benefited by the introduction of his stock.—W.

THE BRISTOL POULTRY SHOW.

THERE are too many proofs to admit of a doubt that the public interest in Poultry is extending and increasing, and not the least of them is that the Exhibitions, hitherto confined to the north of England, almost exclusively, are now becoming general. The Bristol Agricultural Society, like many others, this year added a Poultry Show to their annual Exhibition of other Stock. The show was held on the 6th, 7th, and 8th of December, in a large and commodious room in Partwall Lane, part of the agricultural implement manufactory of Messrs. Fowler and Fry.

The number of pens entered for competition was 295; and when the excellence of many of the specimens, and the short notice given of the show, together with the fact that it preceded that at Birmingham by only one week, are taken into account, we are sure that the Committee and their excellent Secretary, Mr. Marmont, have no reason to regret the conclusion to which they came, to add this new feature to their annual exhibition. The number and respectability of the company, also, showed that they had not been mistaken in supposing that such an addition would prove attractive, and we hope it will turn out remunerative to the funds of the Society.

Our notice of each class must, of course, be short. Taking them in the order of the prize list (we hope the Committee will venture upon printing a catalogue next year), the Spanish first claim our attention, but with the exception of the pen for which the prize was adjudged to Joseph Lake, Esq., there was nothing particular to notice in this class. The Dorkings were a better class, and the pen for which the first prize was awarded to Miss Anne Wilcox were very good birds. The Cochins were the next, and decidedly the best class in the exhibition; the buff preponderating, both in number and quality, although there were two or three pens of very fine white breeds. Of this variety fifty-five pens were entered in class 3, and if we may judge from them of what is likely to be shown in the corresponding classes at Birmingham, the judges there will have no sinecure. Here, at all events, they had no easy task, and there can be no doubt that Cochins are the favourite fowl in the West of England. The first prize was awarded, after much consideration, to Mr. James Pond, of Bath, and the second and third to T. H. Potts, Esq., of Kingswood House. Several other pens were highly commended by the judges. We were sorry again to see the Malays wanting—one pen only being shown, and these not sufficiently good, in the opinion of the judges, to merit a prize. There were fourteen pens of Game Fowl, nearly all good, the principal prize being carried off by P. W. S. Miles, Esq. The Hamburgs were not particularly good as a class, but a few fair specimens were shown, and there was a good pen of Golden-headed Polands. Of the cross-breeds we will only say that we hope they will be excluded from all future shows, both of this and every other Society. The little Golden Bantams mustered strong, but we have seen better birds; while of the Silver variety not a single pen appeared. Some good white ones were exhibited, but the blacks were very poor. The Cochins were equally as good as the adult class, and out of eighteen pens, Mr. Punchard carried off the first and second prizes, the third falling to the share of Mr. Pond. We should ourselves be glad to see the different Societies adopt uniformly a rule, that chickens only should be shown against chickens, and old birds against old birds, and are very sure such an arrangement would save much trouble to the judges, and render their decisions more satisfactory to themselves and to the public. There was a class here for "any breed," in which Mr. Potts was again successful in winning a first prize for a nice uniform pen of young Cochins. The Geese were but middling. The Turkeys better; and the Ducks, in which latter class Miss Wilcox was again the winner, good. The Pigeons, also, were choice, but few; and a pair of fowl marked "Ceylon Jungle," were quite new to us, and very pretty, as well as very distinct.

We are not aware that the other classes require any special notice, but we cannot conclude without adding a hope that the success of the Exhibition, as a whole, and the interest which it evidently excited, will induce the Committee to repeat it in subsequent years, and that they will (as, indeed, they begun this year by doing) take care to avoid the very objectionable practice of appointing dealers to be judges. Upon this occasion, that not very enviable office was filled by Mr. Bissell, of Birmingham, and Mr. Bond, of Leeds. The prize list was as follows:—

Class 1.—SPANISH.

First Prize to Joseph Rake, Esq. No other prize awarded.

Class 2.—DORKINGS.

First Prize to Mrs. Anne Wilcox. Second, Mrs. Neville.

Class 3.—COCHINS.

First Prize, Mr. James Pond. Second and Third, T. H. Potts, Esq. The judges highly commended pens belonging to Joseph Rake, Esq.; John R. Rodbard, Esq.; William Plummer, Esq.; Mr. C. P. Punchard, and John Abraham, Esq.; and commended pens shown by Henry J. Bean Esq.; T. H. Potts, Esq., and Mr. James Pond.

Class 5.—GAME.

First Prize, P. W. S. Miles, Esq. Second, Mr. Thomas Smith.

Class 6.—PENCILLED HAMBURGH.

We omitted to note the prizes in this class.

Class 7.—SPANGLED HAMBURGH.

First Prize, Charles Greig, Esq. Second, Mr. Charles Edwards.

Class 8.—POLANDS.

First Prize, R. J. Bush, Esq. Second, Mr. C. J. Kenning.

Class 9.—CROSS BREED.

First Prize, Mr. James Pond. Second, Mr. John Brackenridge. Third, Mr. Henry S. Pigott.

Class 10.—CUCKOO.

No First Prize. Second, John Burnble.

Class 11.—GOLD AND SILVER BANTAMS.

First Prize, Mr. John R. Rodbard. Second, Mr. Thomas Canning.

Class 12.—WHITE BANTAMS.

First Prize, Mr. G. T. Hodson. Second, Mr. Henry L. Bean. Highly commended, Mr. G. T. Hodson. Commended, Mr. John R. Rodbard.

Class 14.—COCHIN CHICKENS.

First and Second Prizes, Mr. Charles Punchard. Third, Mr. James Pond. Commended, Brooke Smith, Esq. (two pens). Highly commended, G. C. Atkins, Esq.

Class 15.—ANY BREED.

First Prize, Mr. Thomas Potts. Second, Mr. Joseph Rake.

Class 16.—TURKEYS.

First Prize, Mr. John Hill. Second, J. R. Rodbard, Esq. Third, Dr. Wasbrough.

Class 17.—GEFSE.

First Prize, Henry Orum.

Class 18.—DUCKS.

First Prize, Miss Wilcox, (Aylesbury). Second, John Miles, Esq., (Aylesbury). Third, Mr. C. Punchard (Rouen).

Class 19.—GUINEA FOWL.

First Prize, John R. Rodbard, Esq. Second, Daniel Burgess, jun., Esq.

Class 20.—PIGEONS.

Carriers, Mr. William Martin (the whole class commended). Classes, 21, Antwerps; 22, Barbs; 23, Croppers; 24, Runts; 25, Fantails; 26, Jacobins; 27, Turbets; 28, Nuns; 29, Archangels; 30, Trumpeters; 31, Almond Tumblers, all to G. C. Atkins, Esq., whose birds were beautiful, and shown in excellent condition.

TO CORRESPONDENTS.

HITCHIN POULTRY SHOW.—When we first glanced over a letter addressed to us by one of the Committee of the Hitchin Poultry Show, replying to our comment on such shows being held for the benefit of inn-keepers, we did not observe this postscript:—"Is it possible you are a disappointed exhibitor?" We pass over the impertinence of this to reply, though scarcely necessary, that we did not exhibit directly or indirectly at Hitchin. Let us add, for the improvement of our correspondent's self-knowledge, that he who is hasty in attributing an ill-motive to another, should examine closely whether he himself would be actuated by the evil he suspects. The other portions of the letter, written temperately enough, leave our opinion unaltered—that no Poultry Show, should, if avoidable, be held in connection with an inn. The reasons against it are too numerous, and too apparent, to need detailing; and we are too anxious for the success of all Poultry Shows not to point out whatever we consider prejudicial to them.

PREVENTING A HEN SITTING.—"As a breeder of Cochin-Chinas, I have been plagued by their propensity to sit; and I have found the following very good plans for breaking them of that propensity, which, as at this time of the year parties do not want sitting-hens, may be useful to some of your readers. The first way is, when you notice them at all getting broody, which is easily told by their staying longer than usual on the nest when laying, and the quarrelsome disposition they acquire just at that time,

to remove them to another walk, or put them in a coop, and, if possible, let them be removed before they have laid their last egg, or got fond of the nest, and in a few days they will have settled down; and the inclination to sit have gone off. The other plan is, instead of letting them sit on an empty nest for three weeks, and in two cases out of three finding them as bad to break of sitting as they were the first day, if not worse, let them have two or three good eggs to sit upon; they then hatch a chick or two, and they will naturally, in a day or two after hatching, leave the nest with the chickens; let them have them a day or two to roam about with, then take them away. The hen, in a few hours, will forget her offspring, and with them her inclination to sit. The chickens, if three or four lots, may be given to one hen, or disposed of in any other way parties may think proper."—T. B. STEAD.

ORCHID-CULTURE (W. S.).—All orchids should go to rest when they have completed their growth. Your *Oncidium papilio* may continue blooming. Do not, at any time, cut down the flowering-stem till it dies naturally. Your *Aerides odorata*, a foot high; will most likely bloom next year; it is evergreen. *Zygopetalum Mackayi*, just blooming, must have a little water, and be kept growing. It is a winter-blooming species. *Dendrobium nobile*, two feet high, if the shoots are strong and well-ripened, should flower next year; let it now go to rest. It partially loses its leaves; let it remain in the present pot till it begins to grow. The *Aerides* would do best in a rough basket, filled with sphagnum moss only, and hung up to the rafters, about three feet from the glass. The heat you give them is quite right. Your *Cattleya mossiae* is evergreen, and should be grown at the coldest end of your house; let it remain in its present pot till spring. Orchids will do in a mixed plant stove, but should be placed at one end, where they can have the proper treatment. See THE COTTAGE GARDENER for 1850 and 1851, for full information on Orchid-culture.

SPECIMEN PLANTS FOR A GREEN BANK (Mrs. C.).—We think we have seen the very banks you mention, and the waters also, but it was "long, long ago." More recently, we had some delightful rambles along these rivers with the late Sir Thomas Dick Lauder, in his last efforts at painting the beautiful scenery in those parts. On the highest part of the banks we would plant a group of three or four Venetian Sumachs (*Rhus cotinus*), about four feet apart each way; and in four years they will look as one, and "make one grand specimen," as the gardener says. The flowers are charming, and they hold on a long time; but this is not an evergreen. The trees you mention—*Pinus insignis*, *Abies Douglasii*, and *Cypripedium pubescens*, or Chinese Cypress, as you call it—you will, probably, have to send to Edinburgh for. For such sized plants as would suit you, about 5s. each would be a fair price. The Sumachs at 1s. would do. If you have room enough, you ought to have a *Deodar* at 5s.; an *Arctostaphylos* imbricate, about the same; and *Cypripedium macrocarpa* and *C. Goveniana*, for 5s. or 6s. the two; and see you allow them as much room as you can spare, and do not plant them too near to the house.

WHEAT DIBBLER.—We have been favoured with the following replies:—"In answer to 'T. R. N.' the best dibbles for making the holes and delivering the seed at the sowing time is Newberry's (Newington's?). The construction of this machine is perfectly beautiful, and wonderfully effective. It may be had for one, two, three, four, or five rows, and will sow a proportionate number of acres in the day. It delivers from one to three, and sometimes five, grains in each hole, at the rate, the *abundant rate*, of one bushel to the acre. The crop looks in March like a field of green shaving-brushes: such beautiful tufts of plants so equally distributed. Upon land well-drained, fallowed, and enriched, six quarters per acre may be calculated upon. The sowing should take place on the furrow-slice, just mellow, but not too free, or at all barrowed, lest the holes be stopped by the adhesion of the soil. We speak of that we know; for we have not only heard of, or seen, but possessed, used, and felt the benefit of this dibble. The seed time should be rather early, as this deep depositary does not admit of the plant coming up so rapidly as in shallow sowing. The pressed ridges for the seed gives admirable ground-hold to the plants. It has been objected, that the seed-hole forms a dangerous cup for the detention of water. We can only hope that land will be generally drained, when this objection will not lie, or be mentioned. It is a wonderful invention which can render undrained land worse than it is, especially for wheat."—T. BETA. A *Floriol* says:—"I see your correspondent, 'J. R. N.' wishes to know which is the best 'wheat-dibbling machine.' I believe the one invented by Mr. Gillam, of the Bear Hotel, Woodstock, Oxon, is the best. You will find it in the Exhibition catalogue; and I believe it is there recommended, and I know it to be used by many persons around here (Oxford); but by writing to Mr. Gillam, I have no doubt he will send him every information."

GRAPE-GROWING.—Mr. W. Dobson says:—"I have frequently been asked where the best forced grapes grew, that is, within three or four miles of any large town in England? I have been at most of the places round the largest towns in England. My opinion is, that the best grapes are near the town of Leeds, in Yorkshire, where I am staying at the present time. The best near Leeds, last autumn, were in the following gentlemen's gardens, which, I think, could not be beaten near any other town—Sir G. Goodman, M.P., Mrs. Benyon, G. O. March, Esq., Donesthorpe, Esq., John Wilkinson, Esq. These are all near Leeds, and nearly all single-handed places, but far too much work for one man. If Mrs. March's gardener would send you a few lines stating how he manages to grow both Peaches and Grapes together, it would be useful to the readers of THE COTTAGE GARDENER, for those fruits are managed in a first-rate manner." It is very difficult to grow Grapes and Peaches in the same house; and if Mr. March's gardener will favour us with his mode of treatment, he will oblige us and many of our readers.

WORKS ON PEACH AND STRAWBERRY (C. Jones).—You will find these in "The Gardeners' Monthly Volume," and they may be had of Mr. Bohn, Bookseller, London.

WHOSE SHANGHAI FOWLS ARE UNRELATED? (H.).—You are quite right in being anxious to breed from birds not of the same strain; and you are equally correct in saying it is difficult to know which are not so. All that you can do is to inquire of the sellers what is the parentage of their birds, and regulate your purchases accordingly. It is quite true, as you state, that Mr. Punchard had his stock originally from Mr. Sturgeon, but they are quite a distinct strain, and both of them have added

imported birds to their stock, so as to have quite distinct blood. The same observation applies to our own, and many other breeders of Shanghai Fowls; their stocks originally came from some well-known yards, but have been mingled with imported birds, so as to have chickens of a strain that might be coupled, unobjectionably, with chickens from the original stock.

VINEY (An old Subscriber).—Sanders's *Treatise on the Culture of the Vine* will, perhaps, suit you.

WOODLARK (Detlick).—A warm greenhouse would not suit this bird. DORRING COCK (*Cuculionotus*).—We cannot give you the information. Put in a short advertisement, and you will have abundance of answers.

DAMP-WALLS (M. S.).—To prevent damp penetrating, if the smell be not objectionable, paint them over thickly with coal-tar, and dust quicklime thickly upon it. It will form an asphaltic covering.

ROSE-TREE LABELS (Zero).—Mr. Ivion obligingly informs us, that the labels you admired at Syon House (Gardens), were made by Messrs. Morrells, 149, Fleet-street, London.

HARDENBERGIA MONOPHYLLA (Eccegreen).—As the young growth is green and healthy you have no reason to be alarmed, though numbers of the old leaves turn pale and fall off. This is just the method that nature takes to relieve herself from useless appendages in the case of evergreen and semi-evergreen plants. When this, in the case of the *Hardenbergia*, takes place to an undue excess, it is generally attributable to dryness at the roots, a sour soil, owing to want of drainage, or a N.W. foggy temperature. The weather has not been so cold as to demand much fire on that account; but it has been so dull and misty, that a sharp fire in the morning would do great good by creating a rapid circulation of air. Our impression is, that you will find your plant all right, and very beautiful a few months after this.

WINTERING PLANTS.—An Amateur Geranium-grower.—Having a deep wooden frame, surrounded by a wall of turves, with wood platform to keep the plants near the glass, asks—"Can I keep Geraniums, Fuchsias, Calceolarias, Verbenas, and Auriculas, over the winter, by throwing a strong, double mat over the glass at night, and giving air at back in fine days? will extra heat be necessary, or will that of oil lamps do?" See Mr. Fish's article of last week, and somewhat similar ones of last year. Your platform for the plants, and a turf wall round the boards, are capital: could you not make the latter waterproof? Your double mats will be quite sufficient for moderate frosts; but if your plants have been growing, or there is likely to be a frost above 7° or 8°, you would require to place some non-conducting material, such as hay or straw, between them. If you would study neatness, and your own personal comfort, have a waterproof covering. A few large earthenware bottles, filled with hot water, would be the simplest mode of communicating heat; but if your object is merely to preserve the plants during the winter, the bottles will not be so useful for communicating heat as in causing a circulation of air in muggy weather. In such a pit as yours, it is always advisable to have a bundle of dry litter ready to throw over the glass in any sudden emergency. We think we have previously told how a nurseryman, with a small supply of litter, saved his pits of Mignonette, while most of his neighbours lost their stock. During the whole night, he moved, and shook, and turned the scanty litter. He knew all about the radiation of heat.

FLOWER-GARDENS (S. S.).—Your own planting will be noticed when the plan is engrained. (*Caen*).—You mistook the thing altogether, and broke the rules throughout. We plant, or, rather, suggest the planting of such plans as we publish monthly; but we only criticise, or give opinions on the planting of such other plans as are sent to us. The same reply applies to O. J. B., and we must keep to our rules.

MELON SEED (Verax).—Any age above four years does not improve Melon seeds, and might be injurious to some varieties; but there have been no direct experiments we know of to prove this.

CUTTING-DOWN LAURELS (Ibid).—Whoever said that Laurels cut between November and May would get their young shoots destroyed by frost must have been dreaming. Such Laurels do not make young shoots so early, by some weeks, as Laurels not touched. Laurels cut hard-in in March have not the slightest advantage over Laurels cut any day from the end of September to the 1st of May. We have done it, or helped to do it, all these months for many years; and if we were to begin life to-morrow as a Laurel-planter or grower, we would cut down our Laurels any time during the rest season that suited our convenience. The *Laurestinus* is not a Laurel, but a *Viburnum*, and, on account of its flowering, is seldom cut till late in May; but it, also, and all our hardy evergreens, may be cut any day during the winter. There has been more than philosophy about them for ages, which wants reconsidering.

BANKS OF A RIVER (R. J. L.).—Were it not for the overflowing of the river, all the herbaceous plants that would grow in your garden, or in your neighbouring wood, would do on these banks, notwithstanding water does stand at eighteen inches from the surface. *Epilobium*, *Lythrum*, *Callitha palustris*, Single and Double *Trollius*, *Pæonies*, most of the hardy *Lilies*, and such things will answer. Then, as to shrubs, Cat-leaved *Alders*, almost all the *Willows* and *Poplars*, with the whole breed of *Myrtles*, and most *Rhododendrons*, deciduous *Cypresses*, *Snow-drum-tree*, *Bor-tree*, *Aucuba*, and common *Laurel*, will do.

UNPRUNED GERANIUMS (Fiddletick).—Your Geraniums were neglected to be cut down at the proper time, and are now offering to make bottom shoots. Let them be as they are to the end of January, then cut them down to their bottom ages, and about the middle or end of February shake one half of the ball from the roots, no more, and put them in the same pots, with a little rich soil all round; a month after that give them a good shift, and you never had better bloom or finer plants than you will have next summer; that is, because you never had a good bloom of them before: those who neglect to cut them at the right time never do.

MUSHROOMS (E. S.).—We have never seen nor heard of raising Mushrooms artificially on lawns, or grass fields, but we have seen fine crops of them come up between rows of potatoes, from using old dung from a mushroom-bed to enrich the ground. We have also seen similar ones spawning at the time of planting the potatoes. You might, and at very little expense, inoculate your lawn with some best, and be the first to prove the experiment. Spawn your grass next, and in August, if the weather is dry, give them a heavy watering

once a week, and let us know the result. If you have access to old mushroom beds, you might dress your lawn next February, March, or April, with half spent dung and half coal-ashes, and that might impregnate the turf with spawn. But you probably know as much about the subject as any one else.

SHADED BORDER (R. A.).—Trench it three feet deep, and to within one foot of the stems of the Laurels; then plant a row of White Lilies (*Lilium candidum*) at thirty inches from the hedge; then a row of all the kinds of herbaceous *Pæonies* you can get, and here and there in the row, a patch of *Crown Imperials* in variety. In front of that, all the *Narcissus*, and there are upwards of 200 kinds of them—*Snowflakes*, *Leucojums*, a few *Ornithogalums*, and, indeed, any hardy bulbs that will grow to a foot or two feet high; and next the edge, *Crocuses*; nine inches from it, and in front of them, a row of Snowdrops, or *Winter Aconites*. Then each season cut down behind the White Lilies as deep as you trenched, to get rid of the Laurel roots.

PIRETHRUMS AND RASPBERRIES (M. A.).—You do not say which of the *Pyrethrums* your Fever-few is. We suppose of the old double-white. If so, cut it nearly down, and do not disturb yourself farther about it, unless it be a tender kind. These things will go on for years. For your Raspberries, throw up beds above the level, and introduce both decayed vegetable matter, of any kind, and sand liberally, securing them that depth above ground that ought not to be obtained below. Raspberries demand slow-acting mediums. As to your *Aprigots*, "the knowledge of disease being half the cure," we cannot divine anything, as we do not know what may be the conditions.

DISEASED APRICOT (Toparius).—Your Apricot, with one branch shrivelled, is probably rooted deep in an ungenial soil. We would take it up, make a platform, and replant it in sound turfy-loam.

LEGS OF SHANGHAI FOWLS (A. W. C., Norwood).—The colour of the legs of these birds is a pale yellow; a little pink down the sides of the legs, and where the scales of the legs and feet are thinnest, is not objectionable.

RAPE AND LINSEED DUST (Veto).—If we had this "at command," we should boil it in water, and try it with the meal we give our fowls. We should not buy it for such a purpose, because we do not know what its effect upon poultry may be.

PLANTING FRUIT-TREES (A Subscriber from the First).—As your trees are either on a hill, or on the side of a steep slope, let them remain, but have your soil well-drained.

POTATO AND CARROT FAILURES (Edmund).—It is very probable that the cause of the two failures was an over-rich soil and a bad season. Trench your ground; plant in February the earliest ripening potato you can obtain, and sow in April Short Horn Carrots, and you will, probably, have better success. A four-gallon stone bottle, filled with boiling water as often as it becomes nearly cold, will keep the frost out of your little greenhouse.

SPRALIER RAIL (W. Salcombe).—Having a bar along the top is not at all a novel suggestion. They are made so very commonly both in iron and wood. The suggestion that insects are the cause of the *Potato Murrain* was made by Mr. Smece, in 1846, and the suggestion has been repeatedly shown to be erroneous.

F. W. S.—Your plant is *Diplacis glutinosus*, or Clammy *Diplacis*.

DECAY OF CELERY (Ibid).—The cause of the decay is not from being planted in beds, or so close to each other, but from ripeness, or being too much earthed-up at the last time performing this work; and the soil being heavy, with too much wet. Ripeness, we should say, for certain is the very cause of decay. If you will read Mr. Robson's explanations upon this matter, at page 185, you will find all you desire upon this point.

CLIANTHUS PUNICUS, BAUGMANBIA, VERONICA SPECIOSA (A Two Year's Subscriber).—Neither of the three plants we should call good plants for a warm sitting-room; the fine green foliage of the *Veronica speciosa* makes it the best of them, as this can be placed out-of-doors on a showery day, should its leaves be dusty, and it can be taken in again in the evening as clean as ever; besides which, it will endure for years to be pinched up in a small pot, and kept alive with a little water occasionally. The *Clianthus punicus*, of which you have enclosed a leaf, appears to be eaten up with the red-spider, which this plant is very subject to. It is a half-hardy, rampant-growing plant, where it has room, light, and air to go a-head. In your sitting-room it must be a prisoner for want of light and air. It does best when planted out in some large conservatory, either for training up a pillar or rafter. There it is at home, but it will almost do out under a warm wall with a little winter protection. The *Drugmanbia*, or, as it is called, *Datura*, is an odd clumsy-looking plant for a close warm sitting-room. It is true that this is not the season for this to be looking gaily. We should be careful not to over-water it. Like the preceding, it needs more light and air.

CUCUMBER FORCING (G. B. C.).—Cucumbers in the middle of March, or sooner, may be had where a well-regulated heating apparatus exists, and your pit seems very well adapted for that, provided you can command the necessary amount of heat, both bottom and top. The latter, being easiest attained, must not be allowed to range above 70° for cucumbers, and a certain amount of humidity given to it by placing vessels of water in such a way as to intercept the currents of dry heated air on its way into the pit or house; or, if the pipes be open and exposed, vessels standing on them will easily effect that object. In raising cucumber or melon plants, a rather brisk bottom-heat is required, and that not too driving nor yet too humid: at the early period required for the fruit-plants you had better plunge your pots containing the seeds in some fermenting heap; and, just as the cotyledons are breaking through the soil, remove them to your pit, where the atmosphere is more pure; a little contrivance will enable you to give them all the available bottom heat, about 80° or 85° not being too much—over 90° will do no harm, provided other things are favourable. Melon plants, to plant in your pit in May, may be reared in a dung frame prior to that time—very easily; or they may be brought forward with the cucumbers, as at that period the seed vegetates, and the plants grow with less trouble than earlier.

THE COTTAGE GARDENER.—ADVERTISEMENTS.

GERANIUM "ATTRACTION" (KINGHORN).—The Variegated Leaf Geranium, with a Scarlet Horse-shoe, which attracted so much attention at the London Shows during the past season, has been purchased by Mr. KINGHORN, by Messrs. J. & C. J.E.E. and due notice will be given when it is ready to be sent out.

This Advertisement is inserted in consequence of Mr. Guineas having taken advantage of its notoriety by naming a flower of his own "Attraction," which has never been exhibited.

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In this volume the classical reader can refresh himself with a draught of the purest Helicon from the clear and sparkling stream which the Author's narrative resembles. The description of the Geographical, Historical, and Pictorial character of ancient Greece, renews, by its suggestive spirit, the existence of that wonderful people, and almost makes the reader a spectator of the varied incidents of their civil and political career. The Author's object seems purely constructive, so that the minutest features of remarkable sites and scenes, to which great actions or undying thoughts may have imparted a peculiar interest, are carefully described, which render the larger outlines more striking to the imagination of the reader, and more easily filled up. Athens, Sparta, and Corinth—the Temples, Pictures, and Public Walks, of those ancient cities—the Philosophers, the Poets, the Warriors, and the Sculptors—all pass in review, and require but a slight stretch of the imagination, on the part of the reader, to imbue them with the character and spirit of the once living realities.

The author thus simply, yet pleasantly, sketches the preliminary outline of his work, which suggestively conveys the nature and quality of its general composition:—

"The traveller in Greece constructs, in his own mind, from the ruins before him, the once living character of a city, a temple, or a villa. He furnishes them with the beautiful scenes, and refreshes them with the clear waters and cool shades of a Tempe, and decorates them with the fair porticoes of a Pæcile, a Lyceum, and an Academy.

"When Aristagoras, governor of Miletus, came to Sparta, to request assistance from Cleomenes, the king of that city, he brought with him a tablet of bronze, on which was engraved an outline of the earth, and whereon the circuits of seas and courses of rivers were traced. This work was probably the work of Hecateus, the historian of the Asiatic city. It is the earliest effort of geographical delineation which we read of in the annals of Greece. Although rude and imperfect, it served the purpose of conveying to the mind of the spectator a general idea of the leading features of the countries which it portrayed, and was therefore thought worthy of being brought from Asia into Greece, and of being exhibited by an ambassador to a king.

"In this our geographical introduction to the present work, we shall endeavour to present to the reader a rapid sketch of the geography of Greece, similar in execution to the bronze tablet which Aristagoras put into the hands of Cleomenes. We shall attempt to exhibit to him, in a comprehensive and general outline, the form of its lands, and seas, and rivers. This difference, however, will be observed: we design to construct a map from a view of the country, rather than to communicate an idea of the country from the contemplation of a map."

The author now describes the spot he has chosen for his geographical survey, and, after pointing out the leading features which surround it, most appositely remarks:—

"It may reasonably be supposed, that, when Virgil conceived in his mind that noble and original picture, which he has presented to his readers at the close of the fourth Georgic, of the subterranean grotto, in which all the rivers of the earth were born, and from which they issued, by hidden channels and silent courses, into every quarter of the globe, that the idea was suggested to his mind by this particular spot, in which, with respect to the continent of Greece, his poetical vision may be said to have been realized; and this conjecture derives support from the consideration, that the scene which he is thus describing is laid in Thessaly, and, indeed, at the source of the Peneus itself, one of the rivers which rises from this mountain-reservoir at our feet. The reader will also remember the use which our own poet, in the *Paradise Regained*, makes of the *roads* of Italy in his description of the city of Rome, from which they all start, and to which they all return. He will recollect how Milton sends, as it were, his thoughts from that spot, to travel by these routes to the most distant points of the Roman Empire—how, for instance, by the *Æmilian Way*, he penetrates, in imagination, into the forests of Germany, and traverses the British West; how he thence crosses to the Sarmatians, and beyond the Danube to the Tauric Pool: and how again, by the southern communication of the *Appian Way*, he migrates downwards to Syene, and wanders eastward to India and the Golden Chersonese. So it is with the Grecian traveller who stands on the point of which we have been speaking."

In a tour of this nature the reader cannot fail to derive both pleasure and instruction, of the highest and most enduring quality.

The volume is richly illustrated with twenty-eight highly-finished Line Engravings on Steel, and with upwards of three hundred and fifty Vignettes on Wood, which vividly impress on the mind of the reader the most interesting and instructive features of the subject, and render the work one of the choicest issues of classical, typographical, and pictorial excellence.

In addition to these recommendations, the work is preceded by an *Outline of the Characteristics of Greek Art*, from the instructive designs of Mr. SCHARFF, whose illustrations of Horace gave almost a new feature to the work of the great Roman lyrist. It presents the earliest forms in Architecture, sculpture, and painting, as well as those of the most advanced and finished state of the Arts. A description accompanies the drawings, which renders them easily intelligible and instructive to the reader, and imparts a new interest to the general body of the work.

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AND

COUNTRY GENTLEMAN'S COMPANION.

CONDUCTED BY GEORGE W. JOHNSON, ESQ.

No. 222.]

THURSDAY, DECEMBER 30, 1852.

[PRICE 3d.]

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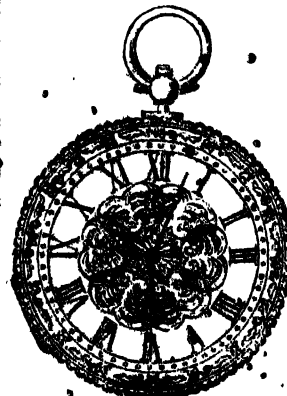
THE REIGATE ASSOCIATION FOR THE IMPROVEMENT OF DOMESTIC POULTRY, will hold its First Annual Prize Exhibition at Reigate, on Tuesday the 1st, and Wednesday the 2nd of February, 1853. Exhibitors must reside within fifteen miles of the Town Hall, Reigate. Entries must be made on or before the 15th of January. For certificates and particulars apply to Mr. Fisher, Bell-street, Reigate.

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WILLIAM SHAKESPEAR, in taking to the above Business, so long and successfully carried on by Mr. Clark, respectfully solicits a continuance of the liberal support so long bestowed upon his predecessor, and begs to announce to the Nobility, Gentry, and Public in general, that he intends erecting Horticultural Buildings of Wood, as well as Metal; and to assure them, that no exertion shall be wanting on his part to secure their patronage and encouragement by moderate charges and prompt attention to all orders with which he may be entrusted.

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SHANGHAI FOWLS.—To be disposed of, a light-buff Cockerel, with bright gold hackle, feathered legs, &c., a very fine bird, weight 20th of November, 8½ lbs. Price, £2 2s.

A bright-buff Pullet, weight 20th of November, 6½ lbs. Price, £1 10s.

A partridge-coloured Pullet, weight 20th of November, 6½ lbs. Price, 15s.

The above were hatched 30th of May last, and are of Mr. PUNCHARD'S breed.

A partridge-coloured Cockerel, well feathered, pearl-eye, &c., hatched last June. Price, £1 5s.

A light-buff Pullet, a very fine bird. Price, £1 10s.

The above were hatched in June last, and are of Mr. STURGEON'S breed.

Three Pullets of August last, one cinnamon, two pale-buff. Price, 7s. 6d. each, of Mr. MOODY'S breed, and

A light partridge-coloured Hen, of last year, from Anster Bonn. Price, £1 1s.

Apply to Mr. SAMUEL OVERTHROW, Cirencester, enclosing a stamped envelope.

MUSCOVY DUCKS.—Four Pairs of young Muscovy Ducks, price 10s. per pair; also a Cock of the silver-pencilled Dutch every-day-layers; and a Cock and Cockerel of the black-breasted red Game, which the advertiser is desirous of exchanging for birds of the same, or a black Poland Cock. Apply to B. P. BRENT, Beasdale Green, Seven Oaks.

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COCHIN-CHINA FOWLS.—Important Sale, entirely from the Stock of Mr. PUNCHARD, of Blunt's Hall, Haverhill, Suffolk. Mr. J. C. STEVENS respectfully begs to announce that he will sell by Auction, at his Great Room, 38, King Street, Covent-Garden, on Tuesday, January 4th, 1853, upwards of 200 First-Class Chickens, all bred from Mr. PUNCHARD'S best Hens, many of them by Cocks imported by him in 1851, and of light Colours. As all the birds included in this Sale are of great merit, Mr. J. C. S. has much confidence in recommending them to the especial attention of Poultry Fanciers. Catalogues will be ready for distribution at least three weeks before the Sale.

38, King Street, Covent-Garden, December, 1852.

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GENUINE SEEDS, &c.—JOSEPH HENRY KNIGHT, Seedsman, &c., Battle, Sussex, begs to return his best thanks to his numerous patrons for their kind support throughout the past year, and hopes, by prompt attention and care, to merit and secure the same for the future. His stock of seeds for the present year has been selected from the best stocks, and saved with particular care. He would beg leave particularly to call attention to the following Collections of Vegetable Seeds, selected in quantities and in sorts, including the newest and most approved sorts for One Year's supply, with particular attention to succession crops.

No. 1. Selected for a garden of an acre in extent . . . £1 10 6

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No. 3. Selection of the newest kinds, confidently recommended for an amateur's garden . . . 0 10 6

No. 4. Selection for a garden of a quarter-of-an-acre . . . 0 5 0

From the number of Collections sent out during the last season, and the many testimonials of approval he has received, he feels confident the above will give general satisfaction. Each kind included in the above Collections will be fully described, and marked with the best time for sowing, &c.

He would beg also to call attention to the following Collections of Hardy Annual Flower Seeds, in packets, with full descriptions, which can be sent post free. 100 most approved and handsome kinds, 7s; 50 ditto, 4s; 25 ditto, 2s 6d; 12 ditto, 1s 3d. Catalogues sent on application.

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Vegetable Seeds in assortments. Full particulars of the assortments are given in the Catalogue.

Peas—30 choice, new, and best sorts, one quart of each, arranged for succession . . . 14 0

„ 10 ditto, one quart of each . . . 8 6

Brocoli—10 finest sorts, one packet of each for succession . . . 4 6

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	per foot.		
16 oz.	2½d. to 3d.	6 by 4, 6½ by 4½	£0 13 0
21 „	3½ „ 4½	7 by 5, 7½ by 5½	0 15 0
26 „	4½ „ 5½	8 by 6, 8½ by 6½	0 15 0
32 „	5½ „ 6½	9 by 7, 10 by 8	1 0 0

Various sizes of 16 oz. Sheet Glass, such as 12 by 8, 12 by 10, 13 by 10, 14 by 10, and 15 by 10, packed in boxes at 18s per 100 feet.

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WEEKLY CALENDAR.

M D	W D	DEC. 30, 1852.—JAN. 5, 1853.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock aft. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
30	Th	Snowdrop flowers.	30.488—26.398	40—31	S.W.	—	9 a. 8	57 a. 3	8 19	19	3 1	365
31	F	Winter Tortoise Moth found.	30.362—30.044	36—28	S.W.	—	9	56	9 37	20	3 30	366
1	S	CIRCUMCISION.	29.956—29.789	35—21	W.	—	9	17	10 a. 56	21	3 50	1
2	Sun	SUNDAY AFTER CHRISTMAS.	29.894—29.637	41—36	S.W.	—	8	0	morn.	22	4 27	2
3	M	Agonum vaporariorum.	29.746—29.512	40—38	S.W.	02	8	2	0 16	23	4 54	3
4	Tu	Sphodrus planus; cellars.	30.122—29.539	44—39	N.W.	01	8	3	1 35	24	5 23	4
5	W	Dromius rufescens; bark.	30.098—29.854	43—39	S.W.	—	8	4	3 0	25	5 49	5

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 42.5° and 31.4° respectively. The greatest heat, 56°, occurred on the 30th in 1833; and the lowest cold, 12°, on the 3rd in 1827. During the period 107 days were fine, and on 68 rain fell.

THE IMPERIAL PAULOWNIA.

(*Paulownia imperialis*.)



This large-leaved tree is now well known in our gardens, and is hardy in the southern districts of England. It was first discovered by Thunberg, in Japan, where it rises to thirty or forty feet; he named it *Bignonia tomentosa*, but it does not belong to Bignoniads, as is currently believed, and as we shall presently show. Dr. Siebold was the next European traveller who found it, and brought home specimens of it, from which it was described by him and Professor Zuccarini, in their "Flora Japonica," and the name they gave, and which it retains, is in honour of the name of the Hereditary Princess of the Netherlands, who was daughter to the Emperor of Russia. It was first raised from seeds, in the Garden of Plants, in Paris, in 1834, by M. Neuman, who received them "from a person to whom they had been sent from Japan in little porcelain pots." Out of this consignment only one seed vegetated, and the plant received greenhouse treatment at first, as did the first Larch-trees that were introduced into Scotland, by the Duke of Athol. As late as 1840, M. Neuman could not determine whether or not his seedling from the porcelain pot was the same as the plant represented in the "Flora Japonica," and there was not a second plant of it then known to be in Europe. So that Dr. Siebold was not he who first introduced *Paulownia*, as is generally supposed.

When the tree seeded at Paris, in 1842-3, it was discovered, from the nature and formation of the seed, that the tree belongs to the Figworts (Scrophulariaceae), and not to Bignoniads, to which it is still referred by some writers. The error is easily accounted for, from the fact, that there is

nothing to distinguish the one from the other in the formation of the flowers. The real difference in the kindred orders being found in the seeds. Thus, the popular English name of *Foxglove-tree* is botanically correct, in addition to the good idea it gives of the flowers which are produced from the end of the branches in close panicles or thyrses. They are as wide in the mouth, but not quite so long as those of the Foxglove, and of a greyish-violet colour, with an agreeable fragrance. The nearest affinity of *Paulownia* is with the *Wightia* of Dr. Wallich, in the same section of Figworts as the Pentstemon. The *Paulownia* was first figured in this country, in 1841, in Mrs. Loudon's *Ladies' Magazine of Gardening*. It was well represented in *Paxton's Magazine of Botany*, in 1842, but the first from English-born flowers is in the *Botanical Magazine*, t. 4606. In 1843, it flowered for the first time in England, in the greenhouse of Mrs. Wray, of Cheltenham, who sent specimens of them to the writer. But it was at Claremont, we believe, that it first flowered in the open air. In the system of Linnæus it belongs to the second order of the fourteenth class, *Didymnia Angiosperma*.

The Bishop of Exeter, in whose grounds at Bishopstowe, near Torquay, it has bloomed, describes the fragrance as "violet-like," but that the tree, as in the *Glycine*, loses much of its beauty by producing its flowers before its leaves.

B. J.

Propagation and Culture.—This fine tree is just as easily increased as are potatoes; and something in the same way, by thick slices, or short pieces of the roots, without the trouble of looking for eyes; and they will grow in any kind of earth, from stiff hard clay to the poorest sandy soil. While it is in a young, small state it is very liable to be much cut by frost: hence the reason why we see so few of them grown as fine standards, with ten feet or more of clear, straight stem; although it may be made to make a growth of ten feet in one season.* An English gentleman, writing from Paris, in 1841, said that he had seen a growth of it made that season to the extent of fourteen feet; and from him I had the first plant of it. If any one wishes to have this tree as a low spreading bush, he has only to plant a small specimen in good rich soil and let it take its chance. It is naturally of a very spreading habit, and will extend a long way, carrying immense leaves; and I fear that is all that it is good for in most parts of this country. At any rate, give it the same treatment as Rhubarb, planting it in low sheltered situations, and cut it down to the ground the first two years, and it will produce leaves quite as large as an ordinary rhubarb leaf. That is just how I would manage it for a small garden. But for a standard, I would endeavour to get a good clean stem as long as possible before I would allow it to spread. The quickest way to get such a tree would be to begin with a strong plant from a nursery, to plant it late in April, in a sheltered, warm place, near a wall or building, and in a pit filled with the richest stuff or compost about a garden; to let it grow there three years, but for the first two years to cut it down clean to the ground before the frost, and in the third season to confine the growth to one stem, and not to let that stem branch; then, before the frost, to tie this growth up to a strong pole, and to thatch it with straw for that winter. Next spring, remove it to a dry, poor soil, and open situation. D. BEATON.

SHOULD it be proved, by further and more accurate experiments, that if the leaves of root-crops are cut off before those roots have arrived at maturity, and that, notwithstanding such removal of the leaves, the roots will go on increasing in size and nutritious constituents equally with other roots of the same crop from which the leaves have not been cut off, then will a heavy blow have fallen upon some of the opinions hitherto maintained by vegetable physiologists. It will be a heavier blow to those opinions than to the botanist, this discovery of the transmutation of *Myiops* into Wheat, for it comes upon us like a thunder-clap, and is in direct opposition to laws which we have been compelled to live under now nearly fifty years; whereas, every schedule and clause of the law of sports and crossings have been critically canvassed over and over again, and even pushed much farther than M. Fabre has done, but without actual proofs, like this.

Two specimens of the Swedish Turnip were on the table at the Horticultural Society's last meeting, not quite so purple, perhaps, as Mr. Skirving's variety, but as fine specimens of size and texture as ever. Mr. Skirving exhibited in London. The whole tops of them were cut off down to the quick last September, and the wounds were now healed over; these turnips, therefore, could never push another leaf from the crown; but several eyes below the crown pushed and made a few leaves. They were not of a size, however, to give any support to the bulb; they were rather sprouts, sucking from, rather than adding substance to the bulb, according to our present ideas. That part of the lecture which referred to this fact was listened to with intense interest. It began by telling us that the Rev. Mr. Smith, author of "A Word in Season," was a scientific farmer; that his land was stiff, and not well-suited for experiments; but that by striking at the roots of popular notions, and following out notions of his own, results were obtained as far beyond present opinions as his plans were different from common practice; that his turnips, last year, after cutting the tops off as early as the tops of the two before us were cut, the yield was twenty-seven tons to the acre; that he could not get on the land this autumn to ascertain, by actual weighing, the positive weight of the present crop, but that he guessed it run from twenty to twenty-four tons per acre; that these turnips are in drills five feet apart, and a crop of early potatoes was got from the intermediate spaces before the leaves of the turnips spread out to cover the ground; that after lifting the potatoes, the middle spaces were deeply trenched, but only taking a small quantity of the new-broken ground to the surface; and, lastly, that before the leaves met and got crowded over the trenched parts they were cut for a green crop, and that the cutting of them did not hinder the turnip from swelling and getting heavier.

After the meeting, the philosophy of all this was canvassed, and the question was asked—Why should the skin of a turnip, exposed to the full influence of the sun and air, at a certain age, not be able to assist and finish the growth, seeing that an apple,

or a gourd, has to do as much? Why not, indeed! You seldom read or hear of an experiment or invention without its suggesting another. And why should we not have under-ground turnips, like carrots and parsnips, to get rid of the "strong, turnipy flavour" peculiar to the garden turnip? The "disposition" to sport in this direction has often cost the farmer more than his share of the "burden" of this heavy country; we allude to the "bunch of keys," the "fingers and toes," and the "forks and tails," into which the turnip "runs" every year.

We must declare our opinion, however, that, at present, the experiments of the Rev. Mr. Smith, and of others, do not prove that turnip bulbs will increase in size and nutritious constituents after their leaves have been cut off. They prove no more than that the leaves may be so cut off at the concluding time of their growth, and that the bulbs remain well-preserved in the soil. Now, did we not know all this before? Have not gardeners, for years past, cut their carrots and parsnips down into the quick, and found that they were preserved better than by any other mode?

It is quite true that fruits will improve in colour and flavour after they have been gathered, but they must have attained their full growth previously; and certainly, after being so gathered, they never increase in weight, nor even if left on the parent plant after this is denuded of leaves. Again, if a Peach, or other fruit, is on a branch from which all the leaves fall off beyond it, that fruit remains stunted and deficient in flavour, or perishes entirely.

In conclusion, we advise our readers to suspend their judgments until experiments more numerous and much more accurate have been tried. Let us have rows with their tops cut off alternating with rows from which the tops are not cut off. Let us have some of the tops cut off at the end of August, and some early in September, before the bulbs have completed their growth in size. If in such cases the bulbs go on not only to increase in size, but to increase in nutritious constituents also, as much as do those on which the usual amount of leaves have been left, then will it have been proved that leaves are not essential for bulbs in the concluding stage of their growth; and gardeners, in future, gratifying their praiseworthy love of neatness, probably may cut off the leaves of Crocuses, Tulips, and the like, when their bloom is over, without heeding the warnings of physiologists and "such small kind."

COVENT GARDEN.

On the morning of Tuesday, the 21st inst., at an hour when half the population of this northern hemisphere were comfortably wrapt in the arms of sleep, we were wending our way to Covent Garden Market. It was an early hour; such an one as, fortunately, we have little experience of in this dark, humid season; but, being anxious to furnish our readers with some account of this great mart during Christmas week, we encountered the difficulties of the undertaking, and after a walk of

some three miles, we reached the place about half-past four or five o'clock. It is curious to traverse the roads and streets of London at this early hour. Where, twelve hours before, all was life and bustle, din and noise, now a calm, still, sepulchral gloom pervades the whole. But as we draw nearer our object of attraction, we hear and see approaching signs of life and activity, which gradually increase till we find ourselves in a perfect bee-hive of hum and industry. Every approach to the market is literally stemmed with waggons, carts, vans, donkey trucks, wheelbarrows, and every description of wheeled vehicle it is possible to think of. These are being laden with the market produce, to be again conveyed to the shops of town and suburbs. For many miles some of these vehicles have travelled to be there at the market hour; some even far in the country, where the very vegetables were grown they have come to purchase; for, as the gardeners never sell anything elsewhere than in the public market, a neighbouring grocer may have to repair some miles to Covent Garden to purchase the cabbages he has watched growing from the windows of his own house.

Having now made our way right into the centre of the throng, the sound that met our ears was "Mistle, Mistle, Mistle-to-o-o-o!" "Holly, Holly, Holly-o-o-o!" shouted in a noisy bawl, which terminated something in the way of what musicians would call a *soprano* part, but certainly far from musical. There were many waggon-loads of both. The former chiefly from Gloucestershire and Bucks, and the latter from Surrey, and the suburbs of London. As regarded the Mistletoe, we had no doubt the former proprietors of it were right glad to get rid of it; but the Holly called up other thoughts and recollections, and carried us back to six years ago, when spending a few days in the country during the Christmas week, we looked out one morning and saw two handsome hollies, each twenty-five feet high, completely bare, with no vestige of leaf or berry, except a sort of mop which had been left on the top. The evening before, when we last saw them, they were the handsomest pair in all the country for many miles round, feathered to the very ground, and rising straight as an arrow, as if they would shoot far away up into the blue sky; they were covered with a perfect shower of bright coral berries, and therein lay the temptation. Great was our grief, and great and numerous were the insectives we poured out on the villanous depredators, but they were miles away by this time, and very likely enjoying the fruits of their ill-gotten prey. How many shrubberies have been damaged and demolished during the past week, it would be difficult to reckon; but we feel assured some of our readers could tell of a few, and of many a handsome holly shorn of its beauties. These wanton Vandals do not restrict themselves to cropping and trimming, but in many instances entire trees are borne away. We observed many specimens of handsome well-grown pyramidal trees, from eight to ten feet high, which had been cut off close by the ground, sold for half-a-crown and three shillings, which it must have taken many years to grow. Besides

the Mistletoe and Holly, there was a considerable quantity of Laurustinus, common Laurel, and Yew. Spruce Firs, for German trees, were also in great abundance, and exhibited a perfect forest of little sombre mountaineers.

VEGETABLES.—The supply of vegetables has been unusually great, which is attributable chiefly to the mildness of the weather bringing everything in at once; the consequence is, prices have been rather dull, and sales heavy. **SAVORYS** were making 1s. per dozen. **GREENS**, that is Coleworts, which are getting unusually large and coarse from the state of the weather, realised 2s. per dozen bunches, and when a quantity was taken, such as ten or twelve dozen, they were done at 1s. 9d. **BROCOLI** was very plentiful, more so than it has been for some time. One grower alone had as many as seventy dozen bundles. Now each of these bundles consists of from six to eight heads, according to the size, but taking the average at seven, this would give 560 heads of Purple Brocoli supplied by one man. These made 6s. per dozen bundles, or 7d. for a single one. **CALERY** was also very plentiful, and made from 6d. to 9d. per bundle. **ONIONS** very fine, 3s. per bushel. **PARSLEY**, 2d. per bunch. **POTATOES** continue plentiful, and realise from £5 to £7 per ton. There have been a few parcels of **SEA-KALE** offered during the week, which were sold at from 1s. 6d. to 2s. 6d. per punnet, according to the quality, some of it being very weak and small. We observed also one or two bundles of **RHUBARB**. These last articles were, of course, both forced, and were of home growth, not imported, as a correspondent says his gardener would have him believe. We thank our correspondent for that communication, which shall form the subject of a few remarks on a future occasion.

FRUIT.—There has been a good supply, but not a very brisk demand for **APPLES**; that is, not such a demand as the salesmen had made up their minds to expect. Baking sorts made from 4s. to 7s. per bushel; and dessert, from 6s. to 10s. 6d. We observed some fine handsome parcels of the old *Royal Russet*, which realised the latter price. *Blenheims* and *Wellingtons* made 7s. 6d. to 8s., and small *Golden Winter Pearmain*, 3s. There still continues a good supply of *Newtown Pippins* and *Lady Apples*, and there have been several arrivals of the old French dessert apple, *Reinette Gris*. In **PEARS**, we have only the sorts which have been enumerated in former reports.

PLANTS AND FLOWERS.—There has been a great show in this department. The **CUT FLOWERS** have been particularly fine and choice. They consist of *Camellias*, *Scarlet Geraniums*, *Epiphyllum truncatum*, *Azalea indica alba*, *Begonia coccinea*, *Chorozemas*, *Cypripedium venustum*, *Roses*, *Christmas Roses*, *Violets*, *Chrysanthemums*, *Euphorbia splendens*, *Chinese Primroses*, *Polyanthus*, *Narcissus*, and *Lily of the Valley*; the two last being forced. **FLOWERS IN POTS**, were *Erica gracilis*, *Mignonette*, *Chinese Primroses*, *Van Thol Tulips*, and *Cinerarias*.—H.

GOSSIP.

It happens to those of moderate income, almost as frequently as to the wealthy, that they are desirous to *transplant a large tree* to some more desired position. The plan of Brown, and its improvement by Sir Henry Stuart, are well-known, and equally so for the difficulties it involves. A more efficient and easy mode, it is said, has recently been invented by Mr. Stewart Mc Glashen, Sculptor, of Edinburgh; and the following report of its success has been sent to us. The experiment was conducted in the presence of a great number of gentlemen and practical gardeners.

"The tree first experimented upon was a slender sycamore tree, of fifty-three feet in height, and five feet four inches in circumference at the thickest part of the stem. The soil was exceedingly damp, from the heavy rain of the previous night.

"The first process of Mr. Mc Glashen is to lay down a frame of T iron—in this case ten feet square. He then takes cutters made of malleable iron, one foot broad, and three feet deep, or, with the head and neck, four and a-half feet. These cutters are driven, by a wooden mallet, into the soil to the depth of three feet all around, and, being inserted sloping inwards, they give to the enclosed mass the form of a square blunted wedge. A rod of iron is then laid along the top of the four rows of cutters, and extension rods going across the frame force the heads of the cutters apart as far as possible, and, consequently, cause the points to converge at the bottom. A clasp or gland is then put around the trunk of the tree, with a mat under it to preserve the bark. Two parallel beams are then laid across the frame and fastened to it with chains. The above constitutes the frame to be raised. The means of raising the mass is a carriage (which also serves the purpose of transportation) consisting of two strong common carts, one at either end, with bolsters raised above the axle-tree of both, and on which bolsters rest two massive parallel beams secured to them with strong bolts. The height of the beams from the ground is about six feet. They, of course, enclose the tree. The process of lifting is exceedingly simple—the whole being accomplished by screw power. The screws are four in number, and so arranged as to make the lift equal. They are made fast to the beams of the frame, and are worked by men standing on planks across the beams of the carriage. The frame and enclosed mass are slowly raised, and the tree, with gentle oscillation, moves erectly upwards. The tree may, it is evident, be raised without the use of guy ropes—the solid mass of earth effectually balancing the trunk and branches—but they were used on this occasion as an extra precaution. After about twenty minutes working of the screws, the tree was completely raised from the pit, the operation having been effected in an easy and gradual manner, and amidst tributes of admiration from all around. It was not the intention to remove the tree experimented upon, but the means of removal being exhibited and explained, all seem satisfied with the feasibility of the apparatus for the purpose. A strong case was shown for the enclosure of the ball of earth, when the tree is to be conveyed to any distance. In moving, the tree still maintains its erect position. The propelling power is, when horses cannot be used, by a winch in front of the foremost cart, and block and tackle; but when the way is clear, and the road good, horses will do the work safely and more expeditiously. The tree is lowered into the pit prepared for it on the same principle.

"The cutters, which are driven in around the root, may sometimes sever the more expanding fibres; but this, we understand, will rather insure new ramifications in its adopted soil than at all affect the health of the plant. In fruit-trees, in fact, this is a device resorted to for the extension of the roots, thus giving new vigour to the plant. From the excessive moisture of the soil on Saturday, the ball of earth was not removed in so complete a mass as might otherwise have been expected—the weight of the water dragging the mould not adhering to the root back into the pit, but still there was more than enough of the native soil of

the tree raised with it to insure its preservation; and the circumstances of the experiment were, in this respect, exceptional.

"It is calculated that, in this instance, the weight lifted was thirteen or fourteen tons; but the inventor and patentee confidently states that, by an enlargement of the apparatus on the same principle, he could lift almost any tree. The principal experiment being accomplished, the company were directed to another part of the policies of Cramond House, where a holly-tree, about fifteen feet high, was lifted by four large and broad spades, forming a case to inclose the root. A similar experiment, by smaller implements, was made on a gorsebush, while some smaller plants were expertly lifted out by two squi-cylindrical spades. In each case the plant was extracted with its native ball of earth. All this was done, and the party afterwards walked to Cramond House, within the short space of an hour and a quarter."

We think that there is no probability of the price of good *Shanghai fowls* declining. We think so, because such birds combine more good qualities than are possessed by any other variety. At present there is an increased demand for such birds of high quality. At Birmingham, Mr. Punchard sold a cock and hen for £25, and Captain Hornby sold a cockerel and three pullets for £30. The taste for them is not confined to this country; they are most highly prized at Constantinople; and a very few days since, at Southampton, a large pen of about thirty of these birds were shipped for Jersey, and another pen, containing a still larger number, for New York. The taste for Shanghaes rests upon a much firmer foundation than some fancied combination of colour, which yet would obtain an enormous price. For instance, it was reported that there would be shown at Birmingham some *White Polands with black crests*, and we know that a gentleman was commissioned to give £100 for the pen if they had been there. No such variety was exhibited; and the last specimens known to have been in existence, we are told, were in the possession of the Duchess of Cleveland.

The following is a list of the *Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

CORNWALL (PENZANCE), January 10th, and 11th. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)

DONCASTER, January 21st. (Sec. H. Moore, Esq.)

GREAT METROPOLITAN, January 1st, 3rd, 4th, and 5th. (Sec. W. Houghton.)

HORLTON, January 12th. (Sec. H. K. Venn.)

TORQUAY, January 14th and 15th. (Secs. A. Paul, and J. C. Stack.)

SOME NOTES ON FORCING.

Wishing to make our remarks suitable, as far as possible, to the period at which they first see the light, we will now touch on those things in the order that will best suit the requirements of our readers; and since this popular periodical has enlarged its sphere of utility, there is little doubt of a considerable accession of readers who are in affluent circumstances, and who possess a miniature forcing-garden, wherein they desire to produce those garden delicacies which are every day becoming more accessible to society at large. In assisting this

object, it will be found that *THE COTTAGE GARDENER* has had no mean share, whether it be as to eatables or decorative matters: it has removed in its day no small amount of ambiguity, and, by tracing matters as far as possible up to first principles, so highly simplified every gardening process, that the owners of gardens may see at a glance whether things are progressing safely or not. It need scarcely be observed, that such adds much to the delights of a garden, and gives a confidence for increased exertions, and the outlay of more capital in garden structures, &c.

KIDNEY BEANS.—Although these may be obtained almost every month in the year, it is not expedient, in ordinary establishments, to attempt to obtain them before February, which may be accomplished by planting immediately. In order to direct the reader's attention to a due economy in the choice of objects for his glass houses, let us consider what conditions are requisite for the forcing and culture of this delicate vegetable. They are as follows:—

- 1st. All the light it is possible to obtain.
- 2nd. A temperature of air of 60° for the lowest.
- 3rd. A liberal amount of atmospheric moisture *ever present*.

4th. A position within a yard or so of the glass.

In addition to these conditions, let us add, that a slight bottom-warmth of 70° to 80° is a very desirable thing if obtainable, although they are very successfully cultivated in pots without it; when they are planted in the soil it becomes highly desirable.

In considering, for a moment, the matter of light, it may be observed, that kidney-beans are very generally placed by gardeners in rows, on the kerb-stones of pits or houses, or on the back shelves of pine stoves or early forcing houses. Where such places are already occupied they may be forced very successfully in frames or pits, especially if fire-heat is applied, and a slight bottom-warmth can be obtained. If fermenting materials alone are used, the forcer must not begin until Christmas has passed, or the probability is his exertions will be rendered futile by excess of damp in the atmosphere. The temperature of air quoted previously must be well secured.—Kidney Beans are almost as tender as Cucumbers: they may endure more cold, but under such circumstances they cannot be rendered profitable. And now for culture.

Soil.—They love a soil rich in decayed vegetable matters, but, like a great many other subjects connected with both in-doors culture and the open ground, this is only a part of the question. A steady permanency of moisture at the roots of plants subjected to the capricious fluctuations of forcing houses during dull periods in December and January, is a thing of greater import than even that of manures. However, Kidney Beans *must* have a generous soil; and the stability to which we have adverted must be sustained by some sound loam in the compost. Again, as the season advances, and heat and light increases, so in like manner does an increase in degree of a sound staple become requisite.

For early forcing, then, let there be—a compost of loam, leaf soil, and old manure, equal parts; and, for an advanced period, equal parts loam, and the other two conjointly. Now, this is the gardener's soil generally, but let not our readers be daunted as to soils—almost any generous garden soil will answer very well, especially if somewhat dark in colour. One thing may be observed, and that is—kidney-beans love not raw soils full of fresh organic matter, and this points at once to the eligibility of any sound soils of a generous character, where loamy matters cannot be had.

Pots.—We think it the best plan to use five-inch pots for the first, and when the beans are become sturdy plants to shift them into seven or nine-inch pots; the latter,

although best, require much room, but then the plants are more productive. It is well to put five beans in each pot, and, when they are up, to thin to three: thus, by striking out any two alternate ones, the remainder will be a triangle; and the beans in triangles will—the pots properly placed—serve to economise space. They require but little water until the pots become filled with roots; indeed, they should not receive a drop from the sowing until fairly up, or they may rot; the soil, therefore, at sowing, must be moist, in order to avert the necessity of watering.

In all the stronger kinds the central shoot may be pinched, as in Cucumber plants; this makes them more bushy, and less inclined to ramble; but we doubt the practice with such kinds as the Newington Wonder, and it certainly causes the crop to be a little later. When the plants are in blossom the use of liquid-manure may commence, and, if applied very weak, may be used constantly. We prefer this practice to strong doses, alternating with clear water, which latter plan is fitful in operation, forcing the plant into an expanse of foliage which is an overmatch for the root when the hour of trial arrives. The chief culture henceforth is to see that they receive regular attention as to watering; to suffer them to go long dry is at once to check their bearing, if not to stop it. They must not, however, be kept wet by any means; a medium must be observed.

EARLY CUCUMBERS.—THE DUNG BED.—It is now an excellent time for the majority of our readers to commence; by the time this goes to press we shall have reached the shortest day, a subject of rejoicing with most, excepting those who cannot pay their Christmas accounts. It is of no use people commencing the culture of this esteemed vegetable earlier, unless they can see their way as to plenty of warm manure. January, in the main, is a light month; and if the plants can be got above ground by about the second week, capital chances may be secured of cutting by the early part of March, which is pretty fair for ordinary cases. To this end, a body of fresh dung, equal to the bulk of the intended frame, must be immediately thrown together; shaking much of the droppings-out, as they make it too fiery and hasten its decay: the object being to preserve the texture of the bed as long as possible. But here a question arises: Do you make what is termed a seed bed? This is by far the best plan; and a little two-light frame, about forty inches wide, by seven feet long, is a most capital thing for rearing young plants in, both for early Cucumbers and Melons. A frame like this, made up in January, is admirably adapted for sundry propagation or rearing purposes for many weeks afterwards; and it will also serve to rear successive crops of both Melons and Cucumbers. By the use of a "seed bed," the permanent, or ridging-out bed, of course, need not be built so soon, by three weeks, and it thus retains its power longer.

And here we may point once more to the necessity of a thorough working of the dung; without this the difficulty of culture will be much increased, as also the uncertainty in the issue. About four turnings must be resorted to, taking care that at each turning plenty of water is used, for this purifies as much as the air. Thus, a heap thrown together to-day, fresh from the stable door, may lie one week at first, then be turned, changing the interior to the exterior, and watering liberally. It may then lie about five days, and receive a similar turning; then another five—at this another copious watering; and again another four or five, and so on; and at the last turning, if tree or shrubby leaves are available, by all means add equal parts with the dung; this makes the best fermenting material imaginable, and it will endure twice as long as the dung alone; besides that, the heat is so much milder, that with ordinary care it can scarcely

burn the roots of plants forced on it. Care must be taken to blend the two materials thoroughly. In building the ridging-but bed, which should be five feet high at back, and four feet at front, we never fill the interior; but merely keep building the outside, and what is termed tying-in the corners—that is, adding extra there, in order to bind the whole securely. In doing this, a good deal will of necessity fall into the interior; and by the time the bed is finished, the middle is sometimes more than half-full. Thus there is plenty of room for soil, &c., and it is almost impossible for the plants to burn. We have found it a capital plan, in adding hillocks of soil, thus to proceed:—Place a very large fifteen-inch garden pot, or other vessel, on its bottom, under the centre of each light, the top or rim about fifteen inches from the glass; place it firmly, and fill it with brickbats, and throw a little straw or moss over the surface to keep the drainage secure. On these, and around them, the hillocks are placed, and we have found it impossible to burn the roots; good linings must, however, be sustained for very early forcing. Melons sown about the first week of January will be ripe about the second week in May; and for that purpose either the green-fleshed Egyptian, Beachwood, Bromham Hall, or Snow's, may be chosen. One of the best kinds in the kingdom is a sort grown by our old and esteemed friend, Mr. Collinson, gardener to the Marquis of Westminster, at Exton Hall; he calls it a green-fleshed Egyptian.

We think, for very early forcing, a compost of equal parts turfy loam, leaf soil, and mellow bog soil, excellent; and if the old leaf soil has some little rotten manure in it so much the better, and a little of the charred materials of the rubbish yard may be added. For Melons, it is probable nothing will ever excel a sound loam of a turfy character, and a twelvemonth old at least—that is to say, such as has been more than a year piled in the compost yard. Depth is the great thing with the Melon: the soil should average at least a foot to have them fine; indeed, on this, and on persisting in keeping down all insects by timely perseverance, and by keeping the vine thin from the very first, depends, in the main, successful culture. To say that they delight in a generous heat is a mere truism; but it may be observed, that pains must be taken to sustain a lively bottom-heat to the last, even with summer Melons. Cucumbers may be suffered to part with most of their artificial bottom-warmth in summer, but this scarcely suits the Melon.

Let us advise the early forcer to give his frames a good stoving with sulphur before use, and on the heels of that to apply a clay paint, well charged with fresh lime.

R. ERRINGTON.

BULBS.

(Continued from page 204.)

ANOMATHECA CRUENTA (Blood-coloured).—Of all the small bulbs from the Cape of Good Hope this is the easiest to manage and to increase; and it holds in bloom longer than any other bulb belonging to the Irids with which we are acquainted. From November to March or April, it may be laid by in a drawer in a paper bag, and if it is then potted in peat, or any light sandy soil, it will soon sprout and be ready to turn out into a south border, in patches, or as an edging, in May, where it will soon be in flower; and if the seed pods are destroyed as fast as they are formed, the roots will keep on flowering till the frost puts a stop to them. Its seeds as freely as oats or barley. February is the best time to sow them in peat—you may sow them "as thick as hail," and in May turn out the ball and divide it into four or six pieces, planting each piece separately in the

open border, and by the end of July they are in bloom. I have seen it come up in the borders, from self-sown seeds, as thick as grass. No frost will hurt the seeds, but I am not sure how much frost the bulbs will endure. If there was a good demand for it, there is no reason why it should not be increased so that it could be sold as cheaply as snow drops.

ANOMATHECA JUNCEA (Rush-leaved).—This is not a very desirable species; and I question very much whether it is an *Anomatheca* at all. I have known so many mistakes about bulbs, that I have very little faith in the characters on which they establish genera; yet the genus was founded on this very plant, which is quite a dwarf, with a rather delicate bulb and small lilac-coloured flowers. It must be grown in a pot and in good turfy peat with a sixth part of sand.

BOMAREA.—Beautiful as most of the *Alströmérias* certainly are, we know none of them, either in cultivation, or by dried specimens, that can at all vie in beauty and stateliness with some of the *Bomareas*, of which about fifty species, and many wild varieties, have been figured and described, although we have hardly half-a-dozen of them yet in cultivation, and none of these even second-rate, except *Acutifolia*, from Mexico. About a dozen years back, Mr. Pentland brought over three sorts of them from different situations near Cusco; but that seems to be too far south for much beauty in this genus; the best sorts being in a belt of country in Peru, a few degrees on either side of the line. I never heard the history of the large collection which Hartweg sent to the Horticultural Society, and which were lost at Cartagena; but, from the point where he crossed the Andes, and from the higher sources of the Magdalena, he must have met with some of them. Mr. Veitch has others gathered by Mr. Lobb; but hitherto they have flowered in winter, and not to Mr. Veitch's mind: and no doubt, as his name is up for the best new things, he will not risk the chance of giving disappointment, so he proves his things before he lets them out of his hands. If his *Bomareas* are really winter-flowering plants by nature, they will not do here, as they, all of them, ought to flower in the open air, and in dry weather, else their delicate tints are gone. After describing what few of them we have in cultivation, I shall give the names and localities of some of the best and most desirable to procure, in the hope that some one will lay a train by which to get them down from the mountains to some ports in Peru, and thence home by the Panama route. In Chili they call the whole tribe, *Flos Martini*, "St. Martin's Flower." Perhaps the same in Peru, and if so, that would be a hint to any of the natives for looking after them.

BOMAREA ACUTIFOLIA.—This is the best of those we have in cultivation. In good, rich soil it twines up ten to twelve or fifteen feet, and flowers in drooping clusters from the ends of the shoots. When the young shoots are about six inches long, in the spring, if the tops are broken off, they will branch better, rise less high, and flower more abundantly. The flowers are nearly scarlet. It ripens seeds freely when trained against a wall, but the plants do not always come true from seeds; all the variations that I have seen are inferior to the species. The simplest way to train all of them is to drive a nail at the bottom of a wall, and to fasten a string or wire to it, fastening it again at the height of eight or ten feet, and if it gets but one turn round the bottom of this it will train itself for the rest of the journey; and if it is a mild season it will keep green to Christmas. It will not cross with any *Alströméria*.

BOMAREA EDULIS.—The accent is on the *u*, but half the world put the stress on *e*. This is a West Indian stove plant, a native of St. Domingo. In the Botanical Magazine, and some other works, it is called *Alströméria salilla*, a very different plant from Chili.

The flowers are middle-sized, chiefly red, and the leaves are quite smooth. It is a scarce plant now.

BOMAREA HIBTILIA.—This is the second best species in cultivation, a native of Mexico. The sepals are red, and the petals greenish, dotted all over with red dots; it does not run so much as *Acutifolia*, but it is more hardy, growing up to a stake in the common shrubbery, as I saw it last October, and in flower, near Oxford, in the beautiful garden of the Rev. J. I. Iys. It seeds against a wall, but will not cross with *Acutifolia*, from the same country. It was first named by Sweet, and figured in his British Flower Garden. After that it was called *Ovata* in the Botanical Magazine; but *Ovata* is a nonentity, and must be expunged from our Dictionary. It goes to rest earlier, and rises later in the spring than *Acutifolia*; these are the two that would twine round for an edging to a bed of *Alströméria*.

BOMAREA SALICILL.—This is a Chilean species, and one of the oldest, being the third species which Feuillet brought to France, *Peregrina* and *Ligtu* being the others; but, by a strange oversight in the Botanical Magazine, *Ligtu* and *Salicilla*, out-door plants, were confounded with *Edulis* and *Alströméria caryophylloides*, which are stove plants, and the error is handed down to this day in some collections. *Salicilla* is a very scarce plant: the flowers are purplish-red, the two back petals having a black spot at the bottom, and the lower petal a light spot. Like *Acutifolia*, it does not always come true from seeds.

BOMAREA SIMPLEX.—There are three varieties of this with reddish-pink flowers. They are Mr. Pentland's plants from Cusco, and they flowered out-of-doors, against a greenhouse, with Dr. Herbert, at Spofforth, in Yorkshire, but what became of them when his collection was dispersed I never ascertained. These are all the Bomareas that I know of in cultivation. Matthews, Tweddle, and Col. Hall, are our chief authorities for the best not yet introduced, of which the following are the chief:—

B. superba. Flowers large, orange and red, twelve in a head, and each flower nearly two inches long. Peru.

B. crinita. Flowers orange and red, on footstalks as long as those of *Cobaea scandens*, setting the flowers widely apart; they are longer and larger than those of *superba*, and ten in a head. It must be a magnificent thing. Peru.

B. crocea. This is figured in the Flora Peruviana, from "Chumputilla in the Peruvian province of Panama." It is saffron-coloured, and grows eighteen feet high.

B. pardina. Twenty large flowers on short stalks, making a superb head of yellow or orange flowers, spotted like a leopard, found by Col. Hall at a place called Patacochoa, "on the western declivities of the Andes, at an elevation of 6000 feet." A splendid thing.

B. Patacocensis. "Another magnificent plant," from the same locality as the last; flowers reddish-yellow, and thirty or more of them in a crowded head.

B. lutea. Flowers bright yellow (Col. Hall), by the road to Mindo, at an elevation of 9000 feet, "on the western declivity."

B. formosissima. Figured in the Flora Peruviana; flowers large, purplish-red and yellow, the petals richly spotted, and as many as eighty flowers have been counted in one head! It grows from ten to twelve feet high, "in woods near Munna."

B. Hookeriana. Petals deep orange; sepals red; one hundred flowers in one head! and leaves six inches long. From the province of Chacabozas, in Peru.

B. densiflora. In habit and colour like *Acutifolia*, and with nearly as many flowers as *Hookeriana*, and from the same locality.

Now, to say nothing of some most beautiful *Alströmérias* and *Collantias* that might be met with, and fifty more plants equally beautiful, that we know of only

from dried specimens, these *Bomareas* themselves would pay a spirited nurseryman to send out a clever man on purpose for them. Every one of them would outlive the winter with slight protection, or, what is just as likely, without any protection whatever. Their very names are circulated to-day for the first time among British, or even European gardeners, and how can we push for things we know nothing about.

BRADIA GYMINIFLORA (Flowering-at-the-joints). This is a small bulb, and in looks is the nearest to an *Iris* of all the Amaryllids. The bulb is solid like that of a crocus, and about the same size. From among its lax-like leaves, it throws up a jointed flower-scape, nine or ten inches long, flowering all the way up, two flowers at every joint, of the same shape and colour as the flower of *Watsonia meriana*, a dull red-tubed flower, but not more than a sixth part of the size. It is a native of Mexico, where it takes a wide range. Galeottu found it growing with *Sprekelia formosissima*. I had it from him, and it flowered and seeded it in an open border. It goes to rest all the winter, and will grow in any light soil. It does not appear to do well in a pot. I never see this plant without its reminding me of an item in the invoice sent with it—£48 for a stupid mule, which made a false step, pulled a huge Cactus out of a gorge, tumbled over a precipice, and broke his neck, yet the brute may be alive to this day for ought that I know. The British Consul in Mexico at the time could tell the tale better than I can.

BRADIA CALIFORNICA.—This is a true *Lilywort*, and is hexandrous, or six-stamend, notwithstanding the views of Decandolle, which are followed in our Dictionary; the old genus has been split many years, and the species with three barren stamens are now called *Leucocoryne*. The present species is the newest of them. It was sent to the Horticultural Society, in 1848, by Mr. Hartweg, from "the mountains and plains of the Sacramento, where it is scarce." It is a very desirable hardy bulb, with pale-blue flowers, having a dark line up the centre of each petal and sepal. It propagates itself readily by offset bulbs from the old one, and it flowers in any good garden soil from July to October; but the great value of this plant is for improving the other species, on the supposition that it will cross with any of them. The Chilean section, called *Leucocoryne*, are the most difficult to keep, to flower, or to increase, of all the half-hardy bulbs. One of them, which I shall mention in its proper place, is so like this one in flower, and both are so like *grandiflora*, except in the relative size of the parts, that one can hardly believe they would refuse to cross. The constitution of this plant must be very similar to that of the Chilean species, judging from the nature of the two localities.

BRADIA CONGESTA.—This is a North American species from the southern states, and may require, like *grandiflora*, some protection in hard frost, as does the *Atamasco lily*, from the same parts. This has a light blue flower, but is more dwarfish, and smaller in all its parts than *grandiflora*. The three are not well adapted for pot culture, owing to their way of growth, like the *Violirionis* of Syria, and our own *Squills*. These, their allies from America, look better in borders, and are less liable to mishaps there than in pots. For a man to be able to grow a good collection of bulbs in pots, he would require to find out a part of the world where no one could get at him from one year's end to another.

BRADIA GRANDIFLORA.—Notwithstanding the name, this flower is not quite so large, nor of such strong substance as *B. Californica*. In other respects it is much like it, and it is equally hardy, and flowers in summer. They all rest in the winter, and prefer a light, deep sandy-soil, if it is fresh, and if not, leaf mould is the dressing for them. In very hard weather the border should be covered with saw-dust, tan, or coal ashes, and,

what is of much more consequence, means should be at hand to throw off the wet. Much wet is more injurious to half-hardy bulbs than cold and frost when the soil is dry, and placing clean sand about them is the best preventive.

BRUNSVIGIA.—All the true *Brunsvigias* form a very natural section of *Amaryllis*, with which they are now known to interbreed, establishing identity of kind. They have all very large oval bulbs with a short neck; their leaves are very broad and recumbent, or lying flat. They all flower in the autumn, after resting three or four months, and before the leaves come, and all of them grow with us from October till May. *Amochuris falcata*, the *Brunsvigia falcata* of our Dictionary, and of others, differs essentially from the true *Brunsvigia*—in resting four or five months in winter, and in not flowering until the leaves are full-grown. Our *Brunsvigia cilicaris*, *disticha*, and *toxicaria*, belong to a very different section, if not a true genus, called *Buphane*; and *Brunsvigia coronica* of our Dictionary is an *Amochuris*, and cannot be determined from *A. falcata*, unless the two were in flower together. *Coranica* is figured in the Botanical Register, and called an *Amaryllis*, which is very probable; but the fact has not been yet proved; at least not to our satisfaction. *Buphane* can hardly be an *Amaryllis*; yet we have seen so many barriers of generic distinctions broken down in these plants, that the wisest cannot say with certainty which is, and which is not, a proper limit to the genus, in the absence of natural experiments in crossing them. Therefore, in treating on all the species under *Brunsvigia*, as they stand in the Dictionary, I shall notice their sections within brackets, and explain their cultivation separately under each species. D. BEATON.

(To be continued.)

SOFT-WOODED, WINTER-BLOOMING, GREEN-HOUSE TWINERS.

TROPEOLUM LOBBIANUM.—Most of our readers are well acquainted with the Indian Cress family, from the hardy annuals, commonly, though improperly, named *Nasturtiums*, with their large showy flowers, and large round, pellate leaves; to those more tender, tuberous kinds, such as *tricolorum*, in which the flowers are beautiful and well seen, though small, and more or less hand or finger-like divided. The species I have named above was introduced, some eight years ago, by Mr. Lobb, from Columbia, and may be said to hold a middle place in the group, the plant, when vigorous, having large pellate foliage, and, comparatively speaking, small flowers. What should be aimed at, therefore, is to make its reddish-orange flowers as numerous, and the foliage as small as possible. For real usefulness this plant is second to none of the family, while, if a few simple matters are kept in view, it will stand roughish treatment, and thank you for it too. As an ornament for the greenhouse, in winter, few things will beat it. I was delighted with it several years; and though, like many other good things, it has been set aside for a time, I intend to give it a niche next season. To save annoyance, I may mention, I never could please myself with it, unless for winter and spring blooming, though I have tried it many ways out-of-doors during the summer; planting it out in the open ground, so that it might run up a post, or along a chain; potting it in poor, sandy soil, and even cutting the roots to prevent luxuriance, and cutting off whole masses of the larger foliage; but do what I would, the few flowers that showed themselves, long-stalked as they were, were too much hid by the luxuriant foliage. Under such treatment, however, it showed itself to be a hardy annual, as the seeds that

were self-sown came up as vigorously the following season as the common *Tropeolum major* generally does. I might say, therefore, that the plant is truly valuable only for winter-flowering.

"How must I treat it best for that purpose?"—It is easily propagated. Seeds sown in a slight heat in April or the beginning of May, will vegetate freely. Cuttings taken off about the same period will answer equally well, or rather better; but, however raised, the plants will soon become vigorous enough. If raised from cuttings, place the cuttings in sandy soil, round the sides of the pot; and place it in a shady place, under glass, and in a little extra heat, if previous to June. You may cover with a bell-glass, but take it off partially, or wholly, at night, or the succulent shoots will damp. As soon as rooted and growing, whether plants or cuttings, let them be potted off in four-inch pots, kept close and warm, to encourage growth, and shifted into a size larger pot, as soon as the first is filled with roots, and keep close again, until growth is freely progressing; and then give air, gradually at first, and then freely; until by the beginning of August, at farthest, the plants may stand in the open air, fully exposed to all the sunshine they can get. Previously to that, however, they should have received their last shift. A pot eight inches in diameter will be large enough to fill a globe trellis three feet high and two feet in diameter. To mount a column, and span a wide arch in a conservatory, a pot nearly double the size would be necessary; for intermediate sizes act accordingly. The soil during the whole growing period should be light sandy loam, with a dusting of leaf mould and charcoal. When the luxuriance is gone, and the plant is showing profusion of bloom, manure-waterings, or a good top-dressing of old cow-dung and charcoal will be gratefully received.

Whether grown for an arch or a trellis, one shoot will always be better than many. If for an arch, it should be taken up a stake, and then on a cord fastened to the top of a wall or pole, and then moved and fastened to the arch in September, and the shoot stopped when it has nearly filled the allotted length. Manure-waterings, and removing by degrees the larger leaves, will cause the side-shoots to grow freely; and then these dangling a yard in length, and covered with bloom, the leaves being little larger than a sixpence, few things are more beautiful. One of the finest things I ever saw in this way was produced from the *Maurandya Barclayana*, but then, so grown in a house, its beauty was gone by August, when it, and such other things, might well be succeeded for three or four months by this *Lobbianum*. As a trellis-plant, however, it will be chiefly used. By the time its one shoot has reached two feet in length, begin to train it round, each turn being about six inches from another, having the point of the shoot looking upward to encourage growth. When thus it reaches the top of the trellis, let it be trained a little back again, and then stop it. Ere long, not only from the base, but all over from the axils of the leaves, young shoots will peep; plenty of water must then be given, and full exposure. At short intervals, a number of the larger leaves should be removed. Do not be afraid in the matter, as we are not thinking of getting larger roots, but a profusion of bloom, with smaller foliage, and with proper watering, there is enough of succulence in the stems to prevent all danger if you do not go to great extremes in thinning. The plants should be housed by the end of September. During winter you will see the propriety of removing at the right time the larger leaves, as for several months you will scarcely see a green part, owing to the dense thicket of blooms. The flowers are useful for nosegays, owing to the great length of their flower-stalks. I have deemed it right to chronicle these little matters, as though the plant is of little pecuniary

value, few things will beat it in winter when thus managed.

As I have got upon this genus, I may just allude to two more.

TROPÆOLUM PENTAPHYLLUM is one of the hardiest of the tuberous-rooted kinds; a native, I believe, of Monte Video. It blooms freely out-of-doors from June to November. On this, the 20th of December, it is still in fair condition, running along a wire between two posts. Like most of the tuberous kinds, you cannot predicate with certainty on the time of its growth. Instead of starting in spring, you will find that they sometimes begin to shew themselves in July, and later; and by keeping them cool and dry, the period of starting will always be retarded, and in course of time get into a habit. Now, I mention this, because all late-starting bulbs of this species will bloom nicely during the winter, and profusely in early spring, along the rafter of a greenhouse, or round a large trellis, if it has plenty of light and air. The soil, however, must be open and rather rich in a medium-sized pot. I have seen them thus treated keep beautiful for the most part of a twelve month.

TROPÆOLUM TUBEROSUM.—A correspondent, lately speaking of the pretty *nice* tubers he had so successfully obtained, but which our English epicures are very careless about, added, that he would like much to know how to bloom it. Now I question if ever it could be made to rival *Lobelia*; but there is no saying what it might do, if it had house-room, and plenty of it, in winter. Even when I have started the tubers early, I never could get the shoots to show bloom until late in the autumn. I recollect, that when first introduced, it was mentioned as a plant that grew three feet in height; but three yards, or even three to that would be nearer the mark in our moist autumn climate. I have been rewarded with a fair portion of bloom twice, in both cases late in autumn, in such a mild season as this; once, in a greenhouse where there was no heat, and once against a wall. In both cases the blooming was arrested by frost in November. The plant against the wall, as well as that in the glass case, was confined in a pot, and the soil was a little peculiar, nearly one half sandy loam, the rest *roughish gravel*.

MANETTIA BICOLOR.—This, with its red and yellow tubular flowers, is a gem of the first water. It generally blooms from November to April. A warm greenhouse is the place for it in winter, such as will suit progressing *Cinerarias* and *Geraniums*. A cool, airy greenhouse, such as would suit *Heaths* and *Azaleas* that you did not wish to hurry into bloom, would be too cold for it; a common plant-stove, far too hot. The same remarks apply to most of the family, especially during their blooming periods. This is, therefore, best when trained round a trellis, so as to be moveable; one, two-and-a-half feet in height, will give you means for a nice little plant. It is also one of those things for which a flat trellis, I mean an upright one-sided one, may be tolerated; as the blooms look very nice when thickly studded on such a surface. The soil it likes is formed of equal portions of heath mould and loam, both fibry, with sand and charcoal to keep it open. Manure-waterings, if weak, may be given with advantage during the summer, when the plant is making its growth. When standing in the greenhouse in winter, a double pot will be useful, to save the roots from being at any time suddenly chilled. The water used should, for that period, be always warmer than the atmosphere of the house. If there is no other convenience, when the plant has done flowering, it should be pruned considerably, and be kept in the closest and warmest end of the house, until growth is freely progressing. When it must be gradually exposed to full light and air. But, where there are hotbeds, or forcing-houses, the neatest plants for winter use are obtainable from cuttings struck

about March. The following is the routine for such plants. Choose firmish side-shoots, about three inches in length; and, as second best, the points of other shoots that are getting rather firm; insert them in sandy soil, with silver sand on the surface; water, and when the leaves are dry, place a bell-glass over them, and set the pot in a mild hotbed; shade from sun; in a week, plunge the pot, if bottom-heat is not above 75°; ease the bell-glass at night with a pebble, to give a little air, making it close in the morning; pot as soon as they root, and as soon as the small pot is filled, pot again, and keep in the hotbed; top the shoots, that you may multiply them; an eight-inch pot will grow a nice plant; by the middle of June take them to a cold pit, keep them rather close until August; expose them freely to sun and air in September; give less air towards the middle of October; by the end of the month remove them where they can have a dry heat, or, for want of a better, to the warm end of a greenhouse.

R. FISH.

THE CHRYSANTHEMUM.

(Continued from page 224.)

HAVING given in my last a few hints on cultivating this favourite flower, I now proceed to give a selected list of the best sorts, such as will answer "Cato's" purpose, as well as of any other grower who wishes to make addition to his stock. The list includes good old kinds, as well as more recently raised ones. I went purposely, at the time they were in bloom, to see a large collection, in order to be sure of selecting good varieties.

LARGE-FLOWERED CHRYSANTHEMUMS.

Annie Salter, deep yellow; fine form, very double; the best of all yellows.

Barbette, rosy-pink; neat flower and good form.

Beauty, a lovely blush colour; finest form, large flower; one of the best.

Bivio, violet-carmine; good form, and rich colour.

California, golden-yellow; very fine.

Chancellor, clear sulphur; fine form.

Christine, light rose; very double, fine form; a good show flower.

Clustered yellow, very double; a tasselled flower of a fine colour.

Cloth of Gold, golden-yellow; extra large; a fine show flower.

Comte Rantzan, dark bright crimson; excellent shape; a good show flower.

Cyclops, fawn and buff centre; good.

Defiance, clear white; extra form, large and very double; fine show flower; has probably won more prizes as a white than any other variety.

Dupont de l'Eure, light carmine, shaded with orange. This is a fine variety.

Duke, a pleasing blush colour, and a fine show flower, with good properties.

Etoile de Versailles, blush-white, tubular florets; very double, and one of the latest bloomers.

Formosa, clear white; fine form; a good show flower.

Fleur de Marie, beautiful clear white, anemone-flowered; fine form; one of the very best of its class.

General Rochambeau, light claret; good form.

General Marceau, light blush; a fine show flower.

Huck, bright golden-yellow, anemone-flowered; very double, large, and a good show flower.

Goliath, a large white flower; well adapted for exhibition.

Hengist, rich dark orange; fine form.

Houbt, salmon, shaded with orange.

Jenny Lind, pure white, incurved and very double; extra good.

King, light rose; a beautiful colour, very double, and a fine show flower.

Lady Talfourd, pure white; very large.

Lavinia, a large flower, of a rosy-blush colour.

Lucidum, good white, incurved; a fine show flower.

Madame Camarson, red-crimson, tipped with gold; a rich-coloured flower, very double, and first-rate form.

Madame Godereau, light bronze, very double; a fine show flower.

Margaret d'Anjou, dark; a fine show flower; extra.

Miss Kate, a delicate lilac colour; fine form; extra.

Nancy de Sermet, a clear white, very double anemone-flower, rivaling *Fleur de Marie*.

Ne plus Ultra, large flower, of a pleasing lilac-peace colour.

Nonpareil, rosy-lilac; large in size, and excellent in form.

Peruvian, dark golden colour; a fine show flower.

Pilot, large flower, of a beautiful pink colour; a good show flower.

Pio Nona, orange-red, with golden tips; a rich, fine flower.

Polyclote, bronze-orange, a large semi-double flower, long petals; fine.

Phidias (New), very distinct, from the old *Phidias*; rose shaded with red; very large.

Queen of England, bluish-white; a splendid large show flower.

Queen of Gypsies, deep orange-red; large and fine.

Rabelais, carmine and yellow; extra show flower.

Sydenham, light carmine-red; a good show flower, with excellent properties.

Temple of Solomon, fine yellow; a good show flower.

The Warden, deep orange, with a darker border; a large, incurved, extra show flower.

Vesta, clear white; good form; fine show flower.

Vulcan, fine dark crimson.

Zoe, rosy-blush; very large.

SMALL-FLOWERED, OR POMPON CHRYSANTHEMUMS.

Adela Renard, pale purple; fine form, and very double.

Argentine, silvery-white, very double, free flowerer. In my opinion this is the best of all the Pompones.

Asmodee, bronze-red; fine form, but rather flat in the face of the flower.

Autumna, bronzy-buff; double and constant; good.

Bouton de Venus, rosy-white; double, and free-bloomer.

Circe, bluish-lilac; neat, double, and good form.

Cybele, golden-yellow; fine.

Elize Mielles, deep rose; fine form; very double.

Fenella, bright orange, rather small, but good form.

Fritillon, yellow; good form, medium size; extra.

Harriet le Bois, lilac centre, with purple tops; good.

Jonas, a fine-formed flower, pale lavender.

La Sapajou, orange and red, anemone-flowered, with smooth petals; double, and good form.

Madame de Contate, shaded bluish; fine form.

Madame la Comtesse de Vutry, light purple, broad petals; fine form, and very double.

Nonsuch, light yellow, very double; excellent form.

Nini, buff, with white centre; neat, and very double.

Perle de Bresil, white; fine shape, very double.

Pompon d'Or, bright golden-yellow; double, and finely formed.

Ranuncule, rosy-carmine; very distinct and fine.

Roi de Liliptul, rose, with carmine edge; double, and of an excellent shape.

Sacrament, dark yellow; one of the best.

Stella, deep yellow; free bloomer, very double, much in the form of a *Ranunculus*. T. APPLEBY.

CONIFERÆ.

(Continued from page 207.)

LIBROCEDRUS.—A genus established by the late Professor Endlicher out of the *Arbor Vitæ* (*Thuja*). Dr. Lindley tells us, in the Horticultural Society's Journal, that the Professor's reasons for so doing are "mainly on account of the scales of the cones being pressed face to face, instead of overlapping at the edges; he also relied upon some difference in the seeds, which appears to be of less importance, and which are not exactly as that lamented botanist supposed them." As this botanical distinction in the genus appears to be sufficient to the acumen of the learned doctor, I have adopted it in this list of Coniferæ, though no common observer could, by its habit alone, see a sufficient difference to separate it from *Thuja*. The name, too, is used in the gardens at Kew, and in all the nurseries round London, and at Bagshot; so that we may consider it fairly established.

LIBROCEDRUS CHILENSIS (Chilian L.)—A beautiful tree, attaining, in its native habitats, the height of forty feet. It is found in valleys amongst the mountains of Chili. It has a considerable resemblance to the common American *Arbor Vita*, yet is easily distinguished from it by its more silvery green, by branching more from the base, and often forming a more conical head. Seeds have been imported largely, and, consequently, plants are plentiful in the nurseries, especially in that of Messrs. Low and Co., at Clapton, and at Mr. Hosea Waterer's, at Knap Hill, near Bagshot. It is perfectly hardy in the south of Britain, and probably will be in the north also, if planted in a sheltered situation. As it is a most beautiful tree, it ought to be in every collection.

L. DONIANA (Mr. Don's L.)—This species is a native of New Zealand, and therefore requires the protection of the conservatory. In its young state it might be easily taken for a dense tree *Lycopod*. There are some fine specimens, four to five feet high, in the greenhouse at Kew. Here they are strikingly beautiful, from their bright, lively, green foliage and singular habit of growth. As an ornament to the conservatory there are few Coniferæ that surpass it in beauty. In its native woods it attains the magnificent height of seventy feet, and is useful as a timber tree, the wood being beautifully grained, close, and heavy.

L. TETRAGONA (Four-sided L.)—From South America. Dr. Lindley observes, that "this species bids fair to be a rival to *Araucaria imbricata*, and to be as hardy, for it comes from just below the snow line of the Andes of Patagonia, where Mr. Lobb found it in the state of a tree from fifty to eighty feet high." It is a magnificent evergreen tree, and, being likely to be hardy, will, when it becomes more common, be planted as largely as its rival the *Araucaria*.

PHYLLIOLADUS, a name derived from *phyllon*, a leaf, and *klados*, a branch. This is a small genus of singular trees, scarcely hardy enough to bear the severity of our winters; but they should have a trial in such counties as Devon and Cornwall, or perhaps against a conservatory wall for a few years, till they become woody, and inured partially, and afterwards planted out in a sheltered situation, they might become more able to resist the cold. I have seen one species, the *P. rhomboidalis*, growing in the open air in the Botanic Garden, at Belfast, and was informed it had stood the winter there with scarcely any protection; but then the climate of Ireland is much milder, especially near the sea, than most parts of England. In that locality (Belfast) I saw *Fuchsia* twelve and fourteen feet high, with stems as thick as my leg, and apparently ten or twelve years old, quite bushy trees. Well may such trees as *Phylloladus* live through the winter in such a climate. It is true the *Fuchsia* is hardy here also, but it only exists as

a kind of herbaceous perennial, dying down to the soil edge every ordinary winter.

PHYLLOCLADUS TRICHOMANOIDES (Maiden-hair-like P.).—This is another remarkable New Zealand tree, bearing some resemblance to the curious-leaved *Salisburia adianthifolia*, only the leaves are more divided at the margin. When young, the foliage is a blue-green; but as the leaves become old they become of a dark brownish-purple, giving the tree a most singular outlandish appearance. As a contrast in colour, as well as a great curiosity, the plant is worthy of a place in a large conservatory. Like most of the New Zealand trees, its hardihood, except in highly-favoured situations, is more than doubtful, and it is, therefore, safer to give it a gentle protection. A very interesting collection might be formed of trees and shrubs like this that would live in a glass-house without heat, but are not hardy enough to be entirely exposed. The only expense would be the cost of the building at first, the keeping them clear of weeds and insects, and a little attention to pruning, and thereby keeping them in form. Some day or another I will draw up a list of plants suitable for such a cold habitation. I am quite sure such a building would be useful; for more plants are spoiled by too much heat than many persons are aware of.

P. RHOMBODALIS (Rhomboid or Celery-topped P.).—This is the *P. asplenifolia* of Dr. Hooker the younger. It is a native of Van Diemen's Land. Like its co-species, it has a most singular appearance, and is a beautiful branching tree, found growing close to the sea-shore. It can only be called a half-hardy tree, requiring the protection of a conservatory, or a glass-house without artificial heat.

T. APPLEY.

(To be continued.)

HOT-WATER versus POLMAISE.

SOME years ago, a warm controversy was carried on in our then existing gardening periodicals of the relative merits of the two modes of heating noted above. The advocates of the newly-invented system of heating by propelling currents of warmed air to circulate through the interior of the building, insisted that the sluggish warmth imparted by hot-water-pipes or tanks, tainted, rather than improved, the condition of the atmospheric air it acted upon; and though it supplied the necessary amount of heat, it was said to be more of a mechanical than of a natural kind. Against this imputation, the friends of iron and water pointed to the many instances in which the atmosphere of structures intended to be Polmaise was little more than a compound of smoke and steam, supplied separately or together, as the case might be; while, in some other cases, where those agents were kept under proper control, the heat supplied was, by certain wayward propensities of its own, all confined to one end, or other place of entrance; coupled with these evils was the extravagant use of fuel required to furnish heat from so limited a space as that from which it was, in the true Polmaise system, confined; this latter evil led to the apparatus taking the character of a "flue" (either long or short) entering or traversing the house; where such was done, the Polmaise resolved itself into nothing more than the old-fashioned "smoke-flue," about whose action our grandfathers knew about as much as we do. Various improvements, in the way of amalgamating the flue and Polmaise together, were tried with more or less success, and the latter plan itself became so altered in character, that its original inventor can hardly recognise it now as having any analogy with the "hole-in-the-wall," and "wet-blanket" mode by which he first introduced it. However, it must be admitted, that some of these hybrid contrivances, whereby the merits of the Polmaise and the smoke-

flue become united, act tolerably well; and, in some few instances, where good gardening skill is brought to bear in the matter, the production of such Polmaise-heated structures cannot be excelled by that of any other contrivance whatever; it is, therefore, only just to infer from such results, that the principle is a good one, but the practical details of working it out rather difficult. This, I believe, its most sanguine friends admit; since none, that I am aware of, have continued long in working order without something going wrong, or, it might be, an improvement appear feasible.

I believe the most successful cases of Polmaise-heating are to be found amongst the class called amateurs; nurserymen, and others in trade, having less interest in novelty than proved utility; while a gentleman's gardener, recommending the construction of anything differing much from what preceded it, is supposed to place himself in the position of warranting its utility, and naturally enough strives to make it fulfil its intended purposes. So that, in cases where the adoption was at his request, I believe the plan had as fair a trial as could be given to anything where the reputation of the adviser was at stake; still, there were many cases where it was abandoned, and hot-water, or something else substituted, and this at a time when gardening periodicals were pouring its merits, or decrying its utility; in fact, the time chosen was one in which it might be fully said to have every advantage of a fair trial, its advocates and accusers being both men of experience, and well qualified, by long practice, to judge of the merits of anything likely to be of advantage to the horticultural world; but the test still lay with that mighty dispenser of justice, "the British public," who, however prone to run away after every novel piece of quackery, be that a railway or a universal medicine, is, nevertheless, sooner or later brought to exercise a sound judgment on each individual case; and in the one regarding Polmaise, it can hardly be questioned by its best friends, but that the public verdict has been an adverse one; there may be those who doubt the justice of that verdict, the same as others may differ from that of the Lord Chancellor in other matters, but that does not much affect the case; for until some strenuous friend of Polmaise show "just cause why its merits have been undervalued, and its defects overstrained, or rather, until he be able to improve the one, and diminish the other, Polmaise must certainly stand second to hot-water as a heating medium." In this view, I believe, I am sustained by the great body of the horticultural world, and certainly by none more so than those who, having given it a fair trial, have abandoned it as defective. Still, it must be admitted, that there are some instances where it has been found to answer, and admirably to; and where it does act well, the condition of the products inside tell, in unmistakable language, how well the plan suits them.

The advantages of a circulation of air, which it is said the Polmaise has over that of other plans, is certainly an important adjunct to the well-being of either the animal or vegetable world; but we may yet live to see a greater circulation of air in hot-water-heated structures than has yet been done by a more liberal influx and efflux from and to the open air. It may be true, that some expense will attend heating a certain quantity of air allowed to escape, but if it be attended with increased luxuriance to the plants grown there, the matter becomes one deserving attention; but this is foreign to the subject of weighing the merits of the two systems as they now stand, so that we must look to the results accomplished in each case; and, giving due attention to the trouble and expense in each instance, we are certainly led to believe that hot-water is, in nine cases out of ten, preferable to Polmaise, as, even with those who have managed the latter in the best manner, the

consumption of fuel is much greater than in hot-water-heated structures. This is certainly an object of consequence where firing is dear, added to which, is the difficulty of contriving to have the fire to act on a substance that will admit the greatest possible amount of heat through without giving way in any manner. Cast-iron plates have been tried, but the action of the fire on the one side expanding that side soon deranges it; and, the edges curling up or down, the smoke escapes into the house as well as the heated air. The best apparatus for heating in that way was by using what hop-driers call a "cockle," which is a square cast-iron box, of something like five or six cubic feet interior dimensions. This box, being cast whole, is without a lid, and an opening (not very large) is made on one side, to which a piece of pipe is attached, conveying the smoke to the chimney. This box, being turned bottom upwards over the fire-place, is thus secured; but the air to be heated has access to it on the top and all sides as well as the one from which the smoke-flue proceeds. This is usually built against the wall, and not unfrequently the front wall, because it enables all the other sides to act on the hot-air chamber. The admission of cold air to this chamber, and the outlet for the warmer portion, by passing over a vessel of water, &c., are the matters in detail which have long been subjects of controversy. Suffice it to say, that in the few instances where it has proved successful, it has been eminently so; while the many cases on record where it has failed, present a sad tale of the damage done by smoke, steam, want of heat, and many other evils. These disasters, repeated so often, imply either a defect in the construction, or that the plan must be a hazardous one. Taking the latter for our guide, we would at once advise the amateur, who is about building or heating a pit or house, to make himself well acquainted with Polmaise before he ventures to adopt it; and, in the absence of the most perfect confidence of his experience that way, we advise him to try hot-water in some of the many shapes it is now presented to our use, which, though none of them be so perfect as they may become, are certainly more likely to give satisfaction than the hazardous plan of Polmaise; but more of this anon.

J. ROBSON.

THE POOR TAILOR.

By the Authoress of "My Flowers," &c.

I AM going to introduce my readers to a scene of quiet, unobtrusive want and distress, which very few know anything about, and which it would be very wholesome to many of us to see and understand. Poverty is sometimes clamorous, and most frequently easy to be perceived. We look for it among the humblest classes, and for them, what can be done is always set apart; but there is a class of sufferers which do not come within the limits of what is called charity—they are too respectable, too delicate to beg, and too superior in their little station to be supposed to be in want; so that kind hearts pass them by, and never hear the sigh of the sorrowful through the closed door.

William Jenkins is a tall, thin, pale, quiet village tailor. His wife is as tall, and pale, and thin as himself; and they inhabit so small a cottage, that one expects to see their heads protruding from the roof. Until last summer they possessed three pale, sickly little children, whose voices were never heard, and whose figures were never seen, unless the door was opened, when Jenkins and his board seemed to take up full half of the little kitchen, leaving just room enough for the wife and children to stand or sit still in the darkness and closeness behind his seat. They are such remarkably quiet keepers at home, that no one seems to know anything of them. Jenkins has a bit of allotment ground, which he manages tolerably well, and to go down with their father sometimes to this garden has been the only air and exercise the poor little children enjoy; and their large melancholy eyes, and solemn faces, speak volumes

about the want of childish play which other children have, but which they cannot get at; having no space behind the house, and being strictly kept from running into evil in the street.

Jenkins used always to have plenty of work. Early and late he was sitting before his window, with work piled about him; and then he made nothing of "stepping" over to the nearest town, about seven miles from the village, besides going about for orders, and looking after his garden-ground too. He is a man who knows "the Truth," and can speak well about it—his habits are very sober, peaceable, and unoffending, and as a tailor he was rather an eminent character. He was always obliging, punctual, and fair in his charges—made capital shooting-coats, and rough country clothes, and things seemed to promise well for him and his pale family.

Alas! times are changed with poor Jenkins. My views of political affairs are, of course, of none account; as a lady, I am supposed to know and understand nothing; but times are, nevertheless, changed, and Jenkins knows it well. There is no work for petty tailors, shoemakers, and artists of that calibre. People have no money, and their wants are narrowing into as small a compass as possible. More than one of the little tradesmen in the village are almost in a starving state; and they look with trembling upon that which is coming upon them.

Last summer Mrs. Jenkins became the mother of twins. It seemed a severe calamity; for her weakness was great, their privations extreme, and the addition of two babies to their other difficulties was almost overwhelming. One of the elder girls had always been afflicted in health; it was a pining, whining little creature, and its poor mother's nights had always been disturbed and broken with its cries and fretting. Two babies, in addition to other drawbacks, was almost beyond the strength and spirits of the poor mother, and her recovery was long and tedious. Fatigue, broken rest, no nourishment, and five children! Oh, little think the rich what sufferings are endured within the cottages that stand thickly dotted around them. Oh! if they would but search and look, and give with their own hand, how much misery would be removed, how much sorrow, and sighing, and sadness, would be done away, even here, now, amid this world of tears and trouble.

One of their neighbours, a kind-hearted, pitying widow, told the tale of poor Jenkins' distresses. She said she knew they were literally in want of food, and that among themselves their poor neighbours had collected a few halfpence to relieve them. Inquiry was instantly made, and it was found quite true. Jenkins was himself unwell, his wife almost exhausted, and one of the twins had never ceased pining and fretting since its birth; so that by night and by day it was a burden to them. Some trifling assistance was at once given; and a kind-hearted fagner did the best thing of all, for he sent them a large can of milk every morning, which nourished parents and children; but it was not possible to do all that was wanted, for they had scarcely anything of their own. Now and then Jenkins earned a shilling, but they could not bear to be in debt, and would rather go without food than take out goods they knew not how to pay for.

Mrs. Jenkins at last recovered from her long illness, and got about again; but the door is always closed, the family are always shut quietly in, and no one sees or hears them.

One day, a lady was passing through a narrow passage that leads by Jenkins' back door to that of another cottage, and stopped to speak to his wife, who was washing in the small space that they called their pantry. Her eyes were bright, but she was thinner and paler than ever, and a child or two were standing quietly by her side, in the midst of the steam and wet linen. In a calm, low voice, Mrs. Jenkins spoke a few words that led to further inquiries, and revealed the extremity of her weakness and distress. She said she has many blessings: her husband never goes into a beer-house, or spends one half-penny from his wife and children—he is kind and thoughtful. Her nights are such with her two babies, that when morning comes she has no strength or spirits. "I seem, ma'am, to be unable to get up—it seems too mighty for me; but then I think to myself, this won't do, I must get on somehow, and I do get dressed at last. My husband lights the fire, and puts

the kettle on, and does what he can, but sometimes I feel as if I could not live through it." There was a vein of religious trust and faith in this poor sufferer's mind. She knew and spoke of God's promises, and she said they upheld her; but for them she should be utterly cast down; and she said she knew that nothing could overwhelm one who acted fully on them. She leaned against the wall, weeping, as she spoke, and said it did her good, and seemed to relieve her, when she could open her heart to one who felt for her; she thought much of her depression arose from weakness of body, for her heart seemed strong, though her limbs trembled, and tears flowed from her eyes.

Poverty like this, perhaps not so meekly borne, but poverty like this meets us at every turn. Where the purse is full, there is plenty for the hand to do; even a word of sympathy and consolation is as balm to the bruised reed, and that can always be given. Where there is only moderate means, much *might* be spared, cut down, or made the most of, to help the suffering, if they were only sought out and cared for. A Christmas, a New Year's dinner, would not do us the less good if it was shared and doled out to the poor, instead of being spread for the affluent. "They cannot recompense thee," saith our Lord, "for thou shalt be recompensed at the resurrection of the just;" will not this satisfy us; can we not "call the poor, the lame, the maimed, the blind," for Jesus Christ's sake?

The old year is ready to depart, and I would say one word to my readers, for it is a "time to speak." Are we all "considering our latter end?" "An end," "the end" is coming upon us all. Who can say he will live to see the close of another year? Are we watching for "the Lord is at hand." Let us keep a solemn fast; not "to bow down the head as a bulrush, and to spread sackcloth and ashes under" us; "wilt thou call this a fast and an acceptable day to the Lord?" No. Let us listen to God's directions how we shall humble ourselves before Him. "Is not this the fast that I have chosen? to loose the bands of wickedness, to undo the heavy burdens, and to let the oppressed go free, and that ye break every yoke? Is it not to deal thy bread to the hungry, and that thou bring the poor that are cast out to thy house? when thou seest the naked, that thou cover him; and that thou hide not thyself from thine own flesh?" "Then shalt thou call, and the Lord shall answer; thou shalt cry, and He shall say, here I am." My dear cottage readers, and all my readers, my pen will never stop if I transcribe these blessings. Let me refer you to the "table of stone," written with the finger of God. Turn, amidst your worldly hurry, to the 50th chapter of Isaiah, read it, study it well. Let it be your old year's chapter and your new year's chapter. You are all gardeners; be yourselves "watered gardens;" "draw out thy soul to the hungry, and satisfy the afflicted soul;" be ye followers of Christ, "the Lord is at hand." Every one of us has, I will engage to say, a "poor brother," a needy, or a suffering neighbour; however small our means may be, we may put a "cup of cold water" to the lips of one poorer and sicker still. Let us remember the poor tailor, his weakly wife, and the cradle with a little head lying at each end. This will quicken our search after other objects of quiet, patient suffering; and we shall relish our own loaf a hundred times more, when we have popped one in at a poor man's door. "Then shalt thou call and the Lord shall answer; thou shalt cry, and he shall say, here I am." Can we wish each other a richer heritage for the coming year?

ALLOTMENT FARMING.—JANUARY.

A HAPPY new year to our allotment friends, and our small farmers and cottage gardeners, and let us hope it will be a prosperous one to its very close; that it may prove so, let them enter the field determined to conquer, for there is a bravery in industry, although not precisely that of the battlefield.

Our industrious readers, those who were quite in earnest through the past year in matters of high culture, will now be enjoying their stores, and will occasionally find such things as carrots, parsnips, Jerusalem artichokes, savoy, &c., excellent companions to a lump of boiled bacon; boiled, of course, in the same pot. And here we

stop, to recommend every poor man who possesses a family of children to purchase a bushel of whole boiling peas every November, and to make a point of using them twice a week. Nothing is more economical in a house, nothing more nutritious. We have reared a family of eleven children, a particularly healthy family, thanks to Almighty God, and they have been thus dieted during the last twenty-four years, so that we at least claim some experience in the use of peas. We generally boil them in a bag, in the same kettle where reposes a lump of fat bacon, or sometimes a piece of the "bed" of beef, and in the same kettle may be found parsnips, carrots, artichokes, turnips, &c. A bushel of good boilers costs about 5s. or 6s., but they must be good; as for split peas, we never think of them. Children, in general, are excessively fond of peas, we have seldom known them refused. And then the liquor; we always keep a bunch of mint in the kitchen, and this being powdered liberally into the pot-liquor makes capital pea-soup. Whilst on this part of our subject, let us point to boiled leeks as another nice necessary to the poor man's table. Now the leeks must be good, grown specially; ours are as thick as a rolling-pin, and perfectly white; in length from about eight to ten inches, that is to say, the blanched part; these, well boiled, require a little butter and plenty of salt, and then greatly resemble first-rate sea-kale, the blanching process reducing all rankness of flavour.

And, now, let us reflect for a moment on the late extraordinary weather, and the probable consequences. Rain! Rain! and an unusually high temperature ever since the early part of November, and that, too, nearly all over our island. It would scarcely be too bold to challenge a well-blanching old gentleman of some four-score years to produce its equal. It is not a matter of wet alone, but of warmth, or, if you will, mildness combined, that gives a special character to the period we have just passed. And now it is that those who possibly may have thought the advice about thorough-drainage, &c., in our autumn allotment papers, too particular, will be convinced that England has not yet half done its duty in this respect. It is of no use looking cross at such pressing advices; the truth ought to be told, and will be told, and the pressure of the times we live in will shortly enforce it.

Some other consequences may be expected to follow also; vegetables, of whatever kind, will be so tender as to become a mass of putrefaction on the frosty trial which may await them; and store-roots, too; we fear the unusual temperature may have the effect of causing much sprouting, and sprouting is a wasting of the stored up virtues of the roots. To be sure, they may increase in size after cutting their heads off, at least so they say now-a-days; but really, this looks too specious to be sound.

Let, therefore, a jealous eye be kept on the roots in store; let them be examined at times in order to be sure that "all's well." These things set in order, the state of the soil should be well looked to as preparatory to the cropping of the next year. Doubtless, portions will have become stagnant through continued wet weather, and means should be taken to enable the waters to pass and the frost to enter. Now, we by no means advise the working of the soil by digging or trenching in a wet state, but lodgments of water may be got away by heaving up stagnant soils here and there, and this we have accomplished lately by using an iron crow-bar, "prising" up the soil, and sometimes by the potato fork. Through the extraordinary wet weather, and the comparative absence of frosts, both farmers and gardeners will be in arrears as to carting and wheeling out manures, and what is worse, many thousands of pounds worth of property in the liquid state will have passed down ditches. These extreme cases will tend to teach people a better economy in manure heaps than to suffer them to lay abroad with large surfaces exposed to drenching rains.

WALKS, BOUNDARIES, &c.—The allotment cultivator requires but few walks, but what he has should be kept in sound repair. It is annoying to think how much time is lost by rotten walks and alleys; they are, in fact, a hindrance to business at all times and in every sense. We find nothing equal to coal-ashes for the purpose, and have made some of the best walks imaginable by applying the quantity intended for a given time, in two coats, one-half laid on and dug in, and the other added without digging, as a casing at

last, taking care to keep the walks full in the middle. This is business which may be at once proceeded with, and any boundary fences or divisions of any kind, which require repairing, let it be done as soon as possible; let not anything of the kind, by any means, or under any pretence, stand over and interfere with spring or summer culture.

MANURES.—Let those plots which require manuring for cropping in February or March be manured as soon as weather permits; it may be spread at once at this period, as little loss by evaporation can take place at this season; but by all means let the ground be dug before a "March dust" prevails. Any manure remaining should be dressed carefully up in a conical heap, patting the outside smooth, or casing it over with soil. We beg again to recommend the preservation of all soot, and if you can beg your neighbours sweepings, so much the better; add them to your manure-heap, only reserving enough in the dry for drill-cropping, what we term practically "priming." As before observed, get some guano, the real Peruvian, and mix three-parts soot to one-part guano; let these be thoroughly mixed, and to facilitate their mixing, let plenty of really dry dust of any kind be added—we have added wood-ashes. This, when well blended, may receive an addition of ordinary soil to increase its bulk three times; if old leaf soil or very old manure, all the better. Such will be found a capital fertiliser, sown in the drills with the seed of such things as mangold, swedes, carrots, parsnips, &c., and will soon speed the young plant out of the way of mischief.

POTATOES.—As the season has been so mild, folks may expect to have long sprouts on their potatoes at planting time, unless they have them examined and turned over immediately. If they are advancing too fast, let them be placed thinner; and, if in pits for seed, by all means let them be taken out before the end of the month, and spread on some floor.

PARSNIPS may be taken entirely up at the end of the month, or they will soon sprout, and lose quality. The ground, too, will be placed at the service of the succeeding crops.

CABBAGES.—We advise those who have young plants for spring-planting to protect them slightly if severe frost occurs. Vegetables are so very succulent, that we are perfectly justified in anticipating much destruction in this way, in consequence of their tissue being distended in an unusual way. A large bundle of new straw, or a little fern, strewed over the seed-bed, or those pricked out, will, perhaps, ensure the cultivator a crop. The very best plan is to let them become frozen, about an inch deep, on to the soil, and then to cover in order to prevent them thawing; and by no means dream of uncovering to admit sunshine: keep them asleep if you can until the end of the frost. Those cabbage plants planted in autumn for early work may have a little soil drawn to their stems when tolerably dry, in order to keep their shallow fibres from severe changes.

LETTUCES.—Protect precisely on the same principle as the cabbages, only do not let them endure quite so much frost as the cabbage.

RHUBARB.—Those who have a reason for obtaining this early should throw a covering of the straw portion of the manure over it when in a perfectly thawed state. This, indeed, should have been done in the beginning of November; but better late than never. There are those amongst cottagers who, keeping a cow and a pig or two, have a little reeking manure; and such we have known to produce Rhubarb of a somewhat profitable character in the market at the end of January. All they want is powerful crowns cultivated specially in a nook sheltered from the winds, and a few old tall chimney-pots, a yard in height. These, the crown having been protected in the aforesaid manner, to keep frost out in November, should have their chimney-pots on as soon as Old Christmas has turned his back; and, of course, the warm manure piled around; a whisp of litter tightly crammed in serving for a cover. Of course, sea-kale may be served the same; but we do not advise any but shrewd men of this class to attempt it.

SHANKING.—Most of our readers know that cabbage-plants, lettuces, &c., are liable to wither up in the stem during the winter months: this may arise from various causes. Every one interested in good culture should always keep some really dry dust by him: this furnishes the bulk

of a useful compost. Let him add to a gallon of this dust a half-gallon of quick lime, and as much charcoal dust, and stir them well: this will be found a mixture at once arresting cankerous processes, and an enemy of slugs, snails, &c.

R. ERRINGTON.

THE APIARIAN'S CALENDAR.—JANUARY.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide," &c.

THE sun has again entered his upward course in the ecliptic, and our little pots will be amongst the first to be affected by his influence, therefore it behoves their owners to look well to their store of food, now that they will be arousing themselves to life and activity.

FEEDING.—It will be well, on the first mild and dry day, to have a thorough examination of all the stocks, and to clean the floor-boards. Where it can be ascertained that the stock has eight or ten pounds of honey in store, feeding had better be put off till next month; but where only four or five pounds, it will be safe to commence at once. If honey or syrup is used, choose a mild, dry evening for supplying it; but if barley-sugar, it matters not so much when it is given.

HIVES.—It will now shortly be time to look over the stock of hives and boxes for the forthcoming season, and I would take this opportunity of saying to the readers of THE COTTAGE GARDENER, who may wish to be supplied through me, that if they will make their applications early, it will save much delay and inconvenience; for the poor man who makes them suffers under a painful infirmity, which incapacitates him for any other work, and hurry, even in this, distresses him much.*

SNOW.—Be careful to close the entrance of every hive whilst snow lies upon the ground; for when the sun shines upon it the bees are induced to come out, and scarcely one in a dozen that alights upon it ever rises again.

ENEMIES.—The chief, and, indeed, the only enemies at this season, are birds and mice, both of which should be carefully guarded against.

MOORS.—The reports generally of bees sent to the moors this year are very good, some having obtained a prodigious quantity of honey, in an unusually short time, and of first-rate quality. To this I can bear testimony; for through the kindness of a friend I have been indulged with a bountiful supply of it.

VISITS TO SOME OF THE CHIEF POULTRY YARDS OF ENGLAND.—No. 1.

(PENZANCE.)

(Continued from page 211.)

Mr. Fox, the owner of the nursery grounds, is himself both a fowl and a pigeon fancier. Of the former he possesses several varieties, but they are mostly young birds, and have not attained the size and beauty which they will doubtless exhibit when the time comes for their appearance in the show-pen. These remarks apply especially to some Spanish fowls, as also to a very promising lot of white-crested black Poland, recent importations from celebrated breeders. The colour of its plumage is a great recommendation to the Spanish fowl, when kept in close confinement in a yard of limited space, but at the same time no bird does greater credit to the owner who indulges it with a good run, free from the smoke of towns. The brilliant metallic lustre which is lavished on well-bred specimens—the coral comb, and white ear-lobe extending over the whole cheek, have deservedly rendered it a favourite with many. In former days Mr. Fox, whom we long remember as a poultry-keeper, possessed what were then reckoned first-class birds—*Minorcas*, or, as they were sometimes called, *Aucques*—fowls somewhat more bulky, but destitute of the elegance of the pure-bred Spanish, although attaining great size, and being capital layers. The various appellations assigned to them are geographically correct, for throughout the whole extent of the Mediterranean coasts a race of fowls are found, allied to the Spanish, though sadly degenerated when compared to the first class birds of the present day.

* Mr. Payne's direction is "J. H. Payne, Esq., Bury St. Edmunds."

The black Polands belonging to Mr. Fox are still very juvenile, but already display undeniable evidence of a pure origin. The white crest, slightly stained with a few black feathers in front; the wing and tail of the cockerel tinged with white; the comb small and spiked, are the principal marks according to which excellence is now awarded; but in every colour of this race one thing is essential, a full, compact, globular tuft in the hens, while in the male birds it must fall backwards on the neck; for any irregularity in the crest is fatal to the pretensions of either sex.

A black Polish chicken, when first hatched, would invoke the sympathy of the most inveterate antagonist of poultry. Glossy black, with a full development of tuft—they seem to anticipate, in their earliest movements, the ever restless activity that distinguishes their subsequent career.

Mr. Fox has long kept a good strain of both gold and silver laced Bantams, whose merits he has been careful to maintain by frequent selection from other fanciers. The present season appears to have given him an undue proportion of cockerels to pullets, so far as the silver laced are concerned. The clear ground colour pencilled with black at the extremity of the feathers—the tail and flight feathers tipped with a dark line of the same—short clean legs of purplish-grey—a comb “rose” in colour as in form, afford us all the points we wish in this Lilliputian family. The gold and silver differ only in the ground colour, the markings of good birds being exactly alike. Many persons imagine that no gallinaceous bird of any kind is safely to be admitted within the precincts of the garden, but Mr. Cuthill, the great market gardener at Camberwell, confirms the advantage of the practice that Mr. Fox has long been accustomed to, in giving Bantams the run of his garden—the number of insects, of the most destructive kinds, that they devour, more than compensates any occasional disturbance of the newly raked border.

Mr. Fox's dove-cote is at some little distance from his poultry houses, which adjoin those of Mr. Bowman, and were built on the same plan. It occupies an admirable position for such a purpose, being sheltered from our prevailing north-westerly winds, and having a clear running stream for the bathtings that pigeons so freely indulge in. We have carriers here, both pied and black; the fleshy excrescence around the eye, and extending to the bill, whose length, with the fine head and powerful wing, with its enduring powers of flight, will commend them to admirers of the species. Each quarter of the world numbers among its inhabitants many by whom the peculiar characteristics of the carrier-pigeon have been trained to excellence, and made available for the manifold purposes of stratagem, intrigue, or commerce. From the shores of the Nile to the Ganges was the carrier in active operation, long before his services were employed in European countries. But now his “occupation's gone,” and wherever “immediate” is inscribed, we should now as soon have recourse to the lumbering and slumbering stage-waggon of former days, as desert the railway and electric telegraph for this or any other aerial messenger. The amusing author of the *Dove-cote and Aviary* tells us, in a letter from Mr. J. Galloway to the *Manchester Guardian*, “that the merchants and manufacturers of Belgium have done more to test the capabilities of pigeons than any other people.” Their annual pigeon matches produce an excitement almost equal to our horse-races. In 1844 one of the greatest races took place, from San Sebastian, in Spain, to Verrier. The distance would be about 600 miles. 200 trained pigeons of the best breed in the world were sent to San Sebastian, and only 70 returned.” The same authority assures us, that “Carrier pigeons do not fly at night, they settle down if they cannot reach their home by the dusk of evening, and renew their flight at daylight the next morning; the velocity of a pigeon's flight seems to be greatly overrated, and no doubt your readers will be surprised to learn that a locomotive railway engine can beat a carrier pigeon in a distance of 200 miles.”

But we must now pass on; a very beautiful pair of fawn-coloured *Jacobins* (first prize at the Penzance Show) are side by side with a Nun. The Capuchins, by which name the former are also known, are so termed from a fringe of inverted feathers extending downwards on each side from the back of the neck; in proportion to the size and regularity of this ruff is their value. Their colours vary, but

the head must always be clear white. Nuns are of smaller size, possessing only a hood; the distribution of their colours is very striking:—black head, the rest of their body being white, save only the flight feathers, and the extremities of the tail, which are tipped with black. Some white Trumpeters hooded and notched with densely feathered feet; Barbs, with the scarlet ring around the eye; Tumblers, Baldpates, Almonds, and other shades, with a pair of Silver Owls, comprise a collection not often met with in provincial towns. One must wonder, indeed, that, for want of purchasers, even at most moderate prices, Mr. Fox is at times obliged, by increasing numbers, to sacrifice many for the purposes of his kitchen.

We have already stated, that Mr. Fox fears no injury, but rather the contrary, to his garden from his Bantams, which are at large; the same good deeds, though perhaps to a greater extent, are wrought, as regards slugs and such like nuisances, by his *Aglesbury* ducks, imported birds from Buckinghamshire during the last year. The same stream of water that affords a bath to the pigeons is happily just that depth which those curious in such matters say is best suited for those ducks who hereafter will appear upon our tables. Remember, then, this grand injunction, “never let a duck swim, it renders the legs inordinately hard.” So say the learned ones, and we believe them to be right.—W.

(To be continued.)

FUCHSIAS.

The plants I wish to bloom in June and July are struck in August the previous year, potted in three-inch pots, and shifted from thence, in October, into six-inch pots, and kept near the glass, in a temperature of 50° or 55°; they are gently syringed over head occasionally, and carefully watered with tepid water until the middle of January, when they will be good strong plants.

They are then shifted at once into twelve-inch pots, with a compost of three parts good fibry loam, one-part peat, and one-part rotten dung, with a good sprinkling of silver sand, all well-mixed together, but not sifted. The plants are then accommodated with a gentle bottom-heat, with abundance of air, maintaining the temperature mentioned above, and 5° or 10° higher, with sunshine, as the season advances. The branches are stopped at the fourth joint, and when they have broken and made four joints more, these are also stopped at the fourth joint, and again the third time in like manner, when they have advanced far enough. Then they are allowed to bloom.

Thus, by giving abundance of air, maintaining a moist atmosphere, syringing morning and evening, and after the plants are well established, supplying them with weak manure-water at every watering, they will break in all directions, and will be one mass of bloom, and have beautiful shining foliage from the pot to the very summit of the plants. I have had them so treated attain to a height of nearly five feet through at the base, forming a splendid pyramid of bloom and foliage. One plant especially, when on the exhibition-table, was compared by one gentleman to “a mountain of bloom.”

Plants to bloom in August and September are struck in January, potted and grown the same way until June, when they are set out-of-doors on slates, in a sheltered situation, and well attended to with weak manure-water. How I prepare this is as follows:—I put a bushel of sheep or cow dung, about half-a-peck of lime, and a spadefull or two of soot into a hogshead, fill it up with soft water, well stir it several times, and when it has settled down, I put about a quart to a bucket of water, which will make this about the colour of brandy.

If bloom buds appear before I want them I pick them off. The plants are never shaded, except when in bloom. Often stopping, and high feeding, combined with abundance of air at all times, are the grand secrets of getting a mass of bloom and foliage. Generally, Fuchsias are driven into bloom too soon, and that is the cause why they cut such a sorry figure mostly. If a man would excel in the cultivation of the Fuchsia, there must be no lagging; no trusting the thing to another; but, the welfare of each

plant must be enquired after morning and evening.—A WILTSHIRE PRACTICAL MAN.

[We hope to hear from this correspondent often, and we recommend his excellent Fuchsia-culture to the attention of our readers.—ED. C. G.]

SHANGHAE FOWLS.

ONE of your correspondents, a short time since, suggested, that in endeavouring to form an estimate of the comparative merits of various breeds of poultry, we should regard them as "egg-making and meat-making machines." With reference to the first of these conditions, I think the verdict of such of your readers as keep Shanghai Fowls will vary somewhat; several having found that an excessive proneness to incubation in their stock detracts from their otherwise undoubted merit; while the fact of eggs by the bushel appearing to have been collected from the Shanghai pens at a season when fresh laid eggs are scarce, whilst other breeds seem to have returned a "beggarly account of empty boxes" at the various poultry shows, would appear to others pretty conclusive evidence of their pre-eminence in this valuable quality.

My own experience tends to prove that different families, or "strains" of pure Shanghaes vary as much in their characteristics as do Spanish, Dorking, or Game Fowls; inasmuch as I have hens that have never gone "broody" the year through; others that have done so after laying seventy-six eggs in a few more than the same number of consecutive days; while, again, others have only laid fifteen eggs before wishing to sit. And as I have noticed that each of these qualities has been perpetuated, to a greater or less degree, in such of their descendants as I have kept for stock, we may fairly infer that an "infusion of fresh blood" from stocks which possess the opposite quality to that which we wish to neutralise, will be found quite as efficacious as the manufacture of a mongrel race, suggested by others of your correspondents. As to their capacity for "meat-making machines," I think there can be no question as to their supremacy over all known varieties of poultry; and if the three following trials are accepted as evidence, they will be found tolerably conclusive on that head:—

	Weighted	lbs.	ozs.		Weighted	lbs.	ozs.
1. Cockrel	Nov. 17	8	8	..	Nov. 25	9	4
2. "	Nov. 29	5	4	..	Dec. 4	6	1½
3. "	Nov. 29	5	13	..	Dec. 4	6	11

They were weighed on the evening of each date: it results, therefore, that the first gained 1½ozs. in eight, the other two 13½ozs. and 14ozs. in five clear days, or at the almost incredible rate of 20ozs. a week.

New, as regards the vexed question of their being voracious feeders, I have kept 120, from four to eight months old (when we may consider them as at their highest consuming power), at a cost of eight shillings a week; but even if "Gallus" had proved against them, to the most objectionable extent, that they are enormous consumers of food, he will admit, at all events, that they do not "put it into a bad skin," and that this consumptive tendency is of a far less heart-breaking character than that to which Spanish Fowls are notoriously subject.

Another question, I have noticed, seems a puzzle to several of your correspondents, viz., the extraordinary value set upon clear-necked light-colour birds. The only solution of the mystery they can arrive at appearing to be, the extreme difficulty of breeding them so. Now if this was the sole reason, it is a sufficient one, as the rarity of most things enhances their value; but I happened some time back to visit the poultry-yard of a gentleman, who had unlimited opportunity of importing the choicest specimens of their kind, and was shown three hens, the plumage of which, on breast, back, and thighs, was a clear cream colour, the hackle, like threads of pale glistening gold, rivaling in brilliancy that of their lords (a privilege rarely granted to the softer sex among feathered tribes), and was informed that this variety is prized, even in China, as "high caste," added to which, they are, from their days of earliest chickenhood, presentable and lovable little pets, quite a contrast to the strange gawky looking objects Shanghai Chickens are re-

puted to be; and I think your readers will agree with me that their intrinsic beauty alone would warrant the high "fashion" they seem destined to attain to. SOL.

COST OF POULTRY FEEDING.

I HAVE seen stated, in some of the late numbers of your COTTAGE GARDENER, the relative consumption of food by Shanghai and Spanish fowls. These remarks have induced me to ascertain the cost of keeping a promiscuous stock; and I am glad to find the expense is less than I had anticipated, and much below what is generally believed. I have twenty-one birds, all with the exception of two that I had as nursing mothers for my young broods, were hatched in May, and being now six months old will, I fancy, require as much food as older birds. Five of these, a cock and four hens, are the third in descent from a direct import from Shanghai; a cock and two hens, Speckled Dorkings; eleven Spanish, of pure breed; and the two old nurses; together twenty-one birds. The Spanish are fed by themselves, whilst the others mess together. The Shanghaes and Dorkings are large birds. The Spanish, by contrast, appear small; yet the quantity of food consumed daily is nearly the same by both lots, and so abundant, that when six Shanghai cocks of four months old were killed, their average weight, when trussed for the spit, was four pounds. I did not ascertain their live weights.

On the 24th of October, my bins being empty, I bought from a grain dealer,

2 stones, or 28 lbs. of Oats,	which cost	-	2s.
Ditto do.	Barley	-	2s.
Ditto do.	Indian Meal	-	2s.
Small Potatoes	-	-	2s.

costing, together, eight shillings, which has served the fowls until last night, being thirty-two days; the twenty-one birds thus costing exactly one penny a head per week. This is satisfactory, showing how trifling the expense is of keeping a mixed stock.

It does not, nor was the experiment intended, to settle the disputed point of the relative expense of keeping large or small fowls. My birds, both lots, being fed alike as nearly as a guessed quantity, no weights being used, could be formed, are large and plump, and any day ready for the table.

My mode of feeding is—when the birds are let out, between seven and eight o'clock in the morning, they have oats for breakfast; at noon, boiled potatoes, mixed with Indian meal; and before going to roost, a feed of barley. The potatoes at noon are mixed, at times, with kitchen scraps; to which I attach no value, as if not thus used they would be thrown on the dunghill. The birds have the run of a grass field, which the Dorkings and Spanish much frequent, the Shanghaes remaining more contentedly within the shelter of a large paved yard.—LTON.

POULTRY SHOWS.

ALTHOUGH we gave so copious a report of *The Birmingham Poultry Show* in our last number, yet there are many facts connected with it that deserve notice. There were about five thousand birds assembled on the occasion, and of those £1300 worth were sold on the first day. The highest price we know of being given was £25 for Mr. Punchard's pair of buff Shanghai fowls (No. 408); and Captain Hornby sold his pen of four of the same variety (No. 272) for thirty guineas. *The Midland Counties Herald* justly remarks that these prices are not more contrasted with those given at the first Show in 1844, than are the Shows themselves. At that little show eight guineas were given for the pen which obtained the medal.

The arrangements of the Committee to facilitate business were all excellent, and can scarcely be improved upon, unless it be by a list, added to, as sales are effected, being hung up outside the sale office, stating which pens are sold, and by a loud announcement of each sale in the office. This would prevent the disappointment attendant upon waiting for half an hour, and then finding that the lot desired, had been sold whilst you were detained.

Since our publication of our condemnation of a dealer in poultry being a judge at a poultry show, we have received so many communications and queries respecting the Judges of the Birmingham Show, that we almost shrink from inserting any of them. Our duty as public journalists, however, must prevail, and we insert the following questions sent to us by a gentleman of high standing. No reply, no rejoinders, either affirmative or negative, shall be inserted, unless written courteously. We have but one object in view—that there shall be no foundation for suspicion of the decisions at Birmingham and other Poultry Shows. We shall pursue that object and our search after the truths needful to be elicited, and our pursuit shall be perfectly without asperity; those who differ from us must be similarly guarded, for we will have no literary ruffianism in our pages.

The questions sent to us are these:—

"Is it true that one of the judges at Birmingham this year, or his man, brought down the birds of the friend of another judge?"

"Is it true that these last received birds obtained a prize and a commendation?"

"Is it true that one of the judges was sending out catalogues on the Sunday before the Show?"

"How many catalogues were sent out before the Show and to whom?"

"When did the judges arrive in Birmingham; and when did each of them first enter Bingley Hall?"

"Is it true, as publicly declared by one judge in the presence of another, that, in one class, the judges wished to give an extra prize, and that permission was refused to them to do so?"

"Is it true that an extra prize was given to a single bird in pen No. 923?"

"To whom did that bird belong?"

"When these queries have been answered, others may follow from

"(1.)—IN THE CORNER."

To one of these questions we can answer, that Mr. Bailey, one of the judges, had a catalogue before the show, and sent it to one of our contributors. We do not blame him for that politeness, but we do say that no judge should have a catalogue sent to him until after he has made his award. As far as possible, the name of a proprietor of any pen should be unknown to any of the judges, and we think sending catalogues to them was a very great mistake, which should be avoided in future.

We have already fully explained ourselves relative to *The Great Metropolitan Poultry Show*, but we have since received a very polite letter from Henry Gilbert, Esq., from which the following is an extract:—

"A Metropolitan Show of Poultry having been long required, and mooted, without success, for several years, and not until after the Royal Agricultural Society had been frequently requested to associate it with the Smithfield Cattle Show at Baker-street, did a few spirited gentlemen amateurs come forward, with a large sum, to carry out, at great expense and trouble, the desired object; whether successfully, or unsuccessfully, for loss or for gain, remains to be proved; the latter was not anticipated. Such is the origin of the Great Metropolitan Exhibition. The list of noble patrons, who are personally known to some of the promoters, must be a sufficient guarantee for their respectability.

"No gain is derived from the sale of refreshments, as you have represented, 'from some neighbouring innkeeper,' nor have the Horns Tavern anything to do with it, and is not even known to me, or the committee. That there will be refreshments I do not deny; so are there at Birmingham, and all other exhibitions where a large and respectable body of visitors is expected.

"The next point you notice unfairly, is the time the birds are exhibited. Again, Birmingham is one example, as we shall not keep them longer."

After what we said last week, it is not needed that we make any further comment upon Mr. Gilbert's statements, than to observe, that he is quite right in observing that at the Metropolitan the birds will not be kept longer in the pens than at Birmingham. The obvious answer to this is, that two parties committing the same error do not make it a praiseworthy practice; and we are quite sure that Mr. Gilbert agrees with us in thinking that five days is too long a time to keep birds at an exhibition. We are not sure that

one of his birds did not die at Birmingham in 1851, and we know that one of Capt. Hornby's did this year; and we are certain that even the strongest constitutioned birds must suffer by the protracted excitement inseparable from exhibition by day, to say nothing of that by gas-light until a late hour at night. We are confident this will be avoided in future.

The *Salisbury Poultry Show* appeared to be still more popular than the other department of the Agricultural Exhibition, on the 13th of December, and was crowded throughout the day, a number of ladies testifying by their presence the interest they felt in this collection of domestic poultry.

Subjoined is the list of prizes:—

Class A.—SPANISH.

1. Captain W. Hornby, R. N., Knowsley Cottage, Prescott, Lancashire, Cock and three Hens, 54 months, 1st prize, 1*l*.
3. T. Pain, Esq., Salisbury, Cock and two Hens, one year and seven months, 2nd prize, 10*s*.

Class B.—DORKINGS.

17. J. W. F. Noyes, Esq., Cock and two Hens, April, 1852, 1st prize, 1*l*.
18. Mr. C. Smith, Durnford, near Salisbury, Cock, seven months, and two Hens, 18 months, 2nd prize, 10*s*.

Class C.—COCHIN-CHINA.

20. H. I. J. Cockerham, Esq., Abington, Wilts, Cock and two Hens, hatched in May, 1st prize, 1*l*.
20. Mr. George Wheeler, Commercial Road, Southampton, Cock and two Hens, eight months, 2nd prize, 10*s*.

Class D.—MALAY.

36. A. C. Sayers, Esq., Clanville House, Andover, Cock and two Hens, one year (speckled), 1st prize, 1*l*.
39. Mr. W. H. Woodcock, Fugglestone, near Salisbury, Cock and two Hens, six months, 2nd prize, 10*s*.

Class E.—GAME.

43. Mr. H. Yates, King's Arms, Lockerly, Hants, Cock and two Hens, two years, 1st prize, 1*l*.
41. Mr. John Stratton, Bodenham, near Salisbury, Cock and two Hens, two years and six months, 2nd prize, 10*s*.

Class F.—GOLDEN-SPANGLED HAMBURGH.

No competition.

Class G.—SILVER-SPANGLED HAMBURGH.

45. W. G. Chambers, Esq., Portsmouth, Cock and one Hen, three years, and one Hen, eight months, 1st prize, 1*l*.
46. W. G. Chambers, Esq., Cock and one Hen, eight months, and one Hen, three years, 2nd prize, 10*s*.

Class H.—GOLDEN-PENCILLED HAMBURGH.

No entry.

Class I.—SILVER-PENCILLED HAMBURGH.

50. Mrs. Mills, Bisterne, Ringwood, Cock and two Hens, 18 months, 1st prize, 1*l*.

Class J.—POLAND.

52. Mr. T. P. Edwards, Lyndhurst Railway Station, Cock, eight months, two hens, two years, 1st prize, 1*l*.
53. Mr. T. P. Edwards, Cock and two Hens, seven months, 2nd prize, 10*s*.
54. Mrs. Mills, Bisterne, Ringwood, Cock and two Hens, 18 months, black, white crest, extra prize, 10*s*.

Class K.—ANY OTHER DISTINCT BREED.

- COMMENDED.—55. Mr. W. Cheyney, Barford Park, Downton, Wilts, Cock and two Hens (Game and Malay), 9 months.

Class N.—BANTAMS.

No first prize.

55. Mr. W. H. Woodcock, Fugglestone, near Salisbury, Cock and two Hens, aged, 2nd prize, 10*s*.

Class M.—BANTAMS, WHITE, BLACK, OR ANY OTHER VARIETY.

57. Major-General Buckley, New Hall, Salisbury, Cock and two Hens, 1st prize, 1*l*.
72. Mrs. Mills, Bisterne, Ringwood, Cock and two Hens (white, single comb), 12 months, 2nd prize, 10*s*.

Class N.—GEESSE.

78. Mr. C. Pinniger, Rockbourne, Hants, Gander and Goose, five years, 2nd prize, 10*s*.
 80. J. F. Hart, Esq., Gander and Goose, four years, 1st prize, 1*l*.
- In this Class a pen (No. 78) was exhibited by T. Pain, Esq., whose united ages amounted to 110 years, i.e., a Gander 10, a Goose 40, and a ditto 60; which goes far to establish the fact of these birds reaching 100 years.

Class O.—DUCKS.

83. C. Penruddocke, Esq., Compton Park, Wilts, Drake and two Ducks, six months, 1st prize, 1*l*.
85. James North, Ford, Salisbury, Drake and two Ducks (black), six months, 2nd prize, 10*s*.

Class P.—TURKEYS.

94. Mr. W. Cheyney, Barford Park, Downton, Wilts, Turkey Cock and Hen, six months, 1st prize, 1*l*.
95. C. Penruddocke, Esq., Compton Park, Wilts, Turkey Cock and Hen, seven months, 2nd prize, 10*s*.

TO CORRESPONDENTS.

*. We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of the Cottage Gardener, 2, Amen Corner, Paternoster Row, London."

IVY (X. Y. Z.).—There is no doubt whatever upon the point. Ivy keeps the wall dry which it covers.

POLMAIRE HEATING (G. B. C.).—Polmaire, as a mode of heating, has seldom been so successful as hot-water. You will see an article by one of our correspondents in to-day's paper; if your house be treated in that way some nicety will be required in giving the necessary quantity of moisture to the air inside; but as you seem to have accomplished that, and supposing you can command the necessary amount of heat, there seems no reason to doubt but that the plan will succeed very well. You must be careful that the openings you have made for the escape of hot air be not in contact with the foliage; notwithstanding its being somewhat mellowed by moisture, it is often too violent to be safely trusted amongst tender plants.

VENTILATION (G. B. C.).—Ventilation, like many things else, has undergone a great revolution the last few years. One thing, however, the escape of impure and highly-heated air, at the highest part of the building, is still regarded as a necessary thing; but the admission of cold air at the opposite lowest extremity, or when in contact with the pipes, flues, or other heating apparatus, has hardly yet advanced so far as it ought to do towards perfection that way; but some of our departmental writers will be enlarging on that soon.

NAME OF AMERICAN APPLE (Inquirer).—The small red and yellow apples packed in barrels from America are the *Lady Apple*. Other answers next week.

FLOWER-GARDEN PLAN (Regular Subscriber).—Your plan is only adapted for mixed planting—at least, the four large beds within the diamond should be so planted. The basket in the middle might be of one strong colour, as scarlet, or yellow, and bordered with white or pink, as, for instance, *Tom Thumbs*, *White Ivy-leaved Geraniums*, or *Yellow Calceolarias*, and *Pink Ivy-leaved*, or *Mangles' Variegated Geranium*. Without knowing the situation of the house, and the exact line of the Rhododendron beds, it would only be guess-work to say what kind of beds ought to occupy the rest of the ground; but as the shape of it is circular, that also would be the best shape for the beds. Even if we could point out the best situation for the extra beds, there is no index by which you could understand the positions; or, in other words, we have no data to make out your meaning, and no index to explain our own, if we did.

CAMELLIA BUDS TURNED BROWN (Sarah).—The reason why the Camellia buds change colour, and fall off, is due to too much dryness in the air they breathe, or a very bad state of the roots, brought on by one or other of a dozen causes. If the roots are at fault, the plants must be repotted early next April, reducing the balls as much as possible; then smaller pots, a light compost of good loam and sand, with a little peat; and, as soon as growth is fairly set in, the plants ought to be pruned by a gardener of experience: no written directions will ever do for this kind of pruning.

OXALIS DEFFIENS NOT BLOOMING (Ibid).—You surely cannot have the right sort. We could not suggest a possible mode of preventing it flowering. If you make holes in a gravel walk with the end of your parsonal, and place a root of this Oxalis in each, every one of them will flower; if you place it on the surface of a bed, it will make roots, leaves, and flowers; if you bury it six inches in rich soil it will come up and flower; or if you plant it in a bed of sand, or coal-dust, it is just the same for the first flowers; but to flower well the year after it wants a bed of good garden mould, and to be kept dry during the winter. If you have any dry roots now, keep them so till the end of April; then plant them by the side of Crocuses. Water them now and then, if the summer is dry, and take them up in October, and after that they will do well.

LACED POLANDS.—Scrutator says—"As a constant reader of THE COTTAGE GARDENER, I have had the old spirit for poultry, which intoxicated me some twenty years ago, revived, although at the present time I do not possess a single specimen of the gallinaceous tribe. To such an extent has this feeling obtained, that I absolutely went from London on Tuesday to witness the exhibition of poultry at Birmingham, intent on renewing my acquaintance with either Gold or Silver-laced Poland (as the Rev. Mr. Dixon says they are not, or ought not to be, spangled). Having reached Bingley Hall at half-past nine, A.M., you may imagine my disappointment at finding not a single pair of well-laced birds, and, worse than all, to find that the judges knew nothing whatever of the points of excellence of my would-be-pets—the first prize for Silver Poland being literally a pen of spotted birds; and, in fact, one might almost suppose that lacing was inadmissible. Nothing could more completely justify your remarks that there ought to be separate judges for different breeds, and that the different points of excellence should be settled. To this end I would suggest to you the propriety of making a commencement in THE COTTAGE GARDENER; and should you approve of the suggestion, and would accept my humble opinion of the points of Gold and Silver Poland (having formerly been a fancier), I shall be only too happy to forward it, together with some feathers from different parts of really first-class birds. This would really be a move in the right direction, and would induce breeders of first-rate birds to exhibit, which at present they have little inclination to do, from the qualities not being understood. By-the-by, I observed that prizes were awarded to black Poland which had had the black feathers cut away from the anterior portion of their top-knots: this should not be." [We shall be much obliged by the proffered communication.—ED. C. G.]

GLOXINIA AND ACHIMENES (A New Irish Subscriber).—Your collection, comprising *Spectabile*, *Victoria Regina*, *Princesse de Lomballe*, *Marie Van Houste*, *Comte Duchesse Helene*, and *General Baudouin*, is very good. You will improve it by adding *G. alba grandiflora*, *G. grandis*, *G. carminea splendens*, *G. Fyflana*, and *G. Pavinghamii*.

The place where you keep them is too warm; that is the reason why they are now showing symptoms of growth, which they should not do, to flower finely in June. Place them in the coolest part of your stove; repot, and start them into growth about the beginning of February; give no water till the shoots appear, and then but slightly, gradually increasing it as the plants advance in growth. A shelf in your cooler orchid-house would be a good situation for them. *Achimenes* require the same treatment as *Gloxinias*, and the same time of starting to bloom in June. The following will suit you. We cannot give prices, but may say the whole are not dear:—*Achimenes Baumannia hirsuta*, *A. Embriata*, *A. longiflora major*, *A. longiflora alba*, *A. grandiflora*, *A. Tugwelliana*, *A. venusta*.

MOST PROFITABLE RHUBARB (A Northamptonshire Subscriber).—The most profitable kind of Rhubarb is the *Victoria*, and the earliest is the *Prince Albert*. The best time to plant is in October; but as that season is past, you may plant any time between the end of March. If possible, let your ground be dry at the time. Send the advertisement, and then we can tell you the charge before we insert it.

BEES.—A Country Curate writes to us as follows:—"To 'Observer's' query, I would reply, that his experience, in respect to the bees of an old stock not leaving the parent hive in any numbers, when the stock had been removed to make way for the swarm, is by no means singular. A similar occurrence fell under my notice last summer. A box-hive in my apiary, with three large windows, now in the possession of a clerical friend near Gloucester, having been compelled to swarm on the 1st of June, was shifted from its original position, on the upper shelf of my American bee-house, to a vacant place on the same shelf, three feet distant. It was at first carefully closed, to prevent the issue of too many bees; but after repeated examinations of the interior condition, of the hive, finding that the bees continued quiet, I opened the entrance; instead of the usual rush, however, only one or two flew out occasionally during the next two or three days, of which, however, not one in ten returned. I accounted for it in this way—that, in the first place, the young queens (of which there were two still unhatched in the box) were in a very forward state, which would have the effect of tranquillizing the bees, even though they missed their old queen-mother. The senior of these princesses, in fact, issued two or three days later, and is that queen alluded to in a former number of THE COTTAGE GARDENER, who, after continuing sterile for about a month, suddenly became prolific, and laid upwards of 750 eggs in two days. Secondly, I argued, there must evidently be a great proportion of quite young bees just hatched, that had not yet ventured much, if at all, abroad. At the end of four or five days, however, they became very active; a few dead nymphs were carried out, and the hive became as active as any in the apiary. Instances like the above may frequently occur; but, perhaps, in such cases, a combination of the above circumstances are necessary. Sometimes it happens that a hive is almost entirely deserted by the older bees, especially when a delayed prime-swarm issues. In this case, of course, there could not be expected a very numerous subsequent issue to rejoin the bees in the old stand, as what bees remained, would naturally gather round the infant brood of royalty, as well as be stupified by the rapidly-falling temperature of the hive, until the population has so much increased as to rouse them up again. I may add, that I have never possessed an observatory-hive, such as your correspondent speaks of."

LILIES (J. B.).—We should readily give you the desired information respecting your Lilies, but do not know what kind of Lilies you are speaking of. Send us a specimen of them, and we will set you right! Your plant sent, which was given you by an old gardener, is one of the best of plants for summer bedding-out in the flower-garden. It is a hardy, greenhouse, under shrub, and roots freely from cuttings. Its name is *Calceolaria ageratoides*, or *Ageratum-like Calceolaria*.

BACON HOPPER (A Half-pay Officer).—I suppose the Bacon Hopper is identical with the Cheese Hopper, *Psiphila casei* (see COTTAGE GARDENER, vol. 4, page 79); but it is curious that our Natural History Insect Books make no mention of its also attacking bacon. If your correspondent rears any flies, I shall be glad of a few specimens, as it may prove to be one of the other species of the same genus.—J. O. WESTWOOD.

ORCHARD.—If your forty-one trees are standards, that is, nearly six feet high in the stem, you may by all means plant dwarfs between, but do not depend on severe pruning for limitation; this is downright bad gardening. Make platforms not more than fifteen inches deep, to force the roots near the surface. We should get the trees on dwarfing stocks, viz., *Pears on the Quince*, *Apples on Paradise*, &c. Mr. Rivers, of Sawbridgeworth, is highly to be relied on, for plants on the dwarfing system. Plant the following:—*Apples*.—Ashmead's Kernel, Lamb Abbey Pearmain, Braddick's Nonpareil, Hick's Fancy, Gooseberry Apple, Beauty of Kent, Pearson's Plate, Adams' Pearmain, Golden Reinette, Alfriston, Mank's Codlin, Kerry Pippin, Fearn's Pippin, William's Pippin, King of Pippins, Ribston Pippin, John Apple, Kewick Codlin, Dumelow's Seedling. *Pears*.—Beurré d'Ananias, Easter Beurré, Dunmore, Capiamont, Quot Moreaux, Ne plus Meuris, Beurré Diel.

STRAWBERRIES (A Constant Subscriber).—Your strawberries will defeat the end in view; they cannot be forced early; might do for a frame in February.

LIST OF FRUIT TREES (A Country Parson).—For *Descent Apples*: Williams' Pippin, Lamb Abbey Pearmain, Kerry Pippin. For *Kitchen Apples*: Dumelow's Seedling, Mank's Codlin, Beauty of Kent, Gooseberry Apple. *Five Sorts of Plums*.—For *Descent*: Greengage and Golden Drop. And for *Tarts*: Washington, Magnum Bonum, and Orleans. Your *Hollyhocks* must be either too young, or hard-wooded plants, or the soil is weak.

GRAFTING ON UPPER SIDE OF BRANCHES (Verax).—It is almost impossible how you put the scions in, so long as at least on one side bark meets bark once; consequently, the obvious matter is well in contact. We, in the case of apples, pears, &c., simply cut off a slice, as in whip grafting, only horizontal instead of perpendicular, and make a slice, as in the whip mode, to steady the graft, taking care to fit one side, as before stated. The slice cut must be through the inner bark, and a little way into the wood; of course, a similar slice is cut from the scion. We believe that *Bon Louis Pear* is a very old and discarded variety. We

little doubt it is the original Louis Bonne of "London and Wise's Complete Gardener," where, at page 59, you will find a long account of it. This work is dated 1710.

ROSES (Ibid.).—Will not *Felicite perpetuelle* do for your west wall? If your *Blairi*, No. 2, is like ours was last and the previous year, it will throw out bunches in plenty from the axillary buds in May and June. We simply prune away the immature points of the gross shoots in March, removing totally much of the old spray. We think it the best plan with the *Himalayan Conifers* to sow them immediately, in boxes containing a free loam in a moist state, and then to cover the boxes two inches deep with sphagnum, to supersede the necessity of watering if possible; for watering is apt to rot them in the act of germination.

PERIODICAL (S-H.).—The work you name comes out monthly.

RABBITS (J. S. A.).—Our correspondent says he has been a rabbit fancier these thirty years, and that he has bred the longest eared rabbit ever known. He has her, for it was a doe, preserved in a glass-case. Her ears, from tip to tip, measured twenty-two inches, and each ear in width was five inches and three-eighths. Her weight 18lbs. We quite agree with you that a series of papers on the breeding and rearing of rabbits would be very useful, and if you will write them, we will publish them in *THE COTTAGE GARDENER*.

VINE BORDER (J. W.).—If needed, a top dressing of guano, bone-dust, rape-cake, and limy rubbish, would make as good a compost as could be devised.

GREEN MILDEW.—L. C. says his house faces the north, and is constantly covered with green mildew. He would be obliged by any one saying what is a known remedy.

GOOSEBERRY AND CURRANT CATERPILLARS.—H. M., Belfast, would like to hear if any one has tried the applying of liquid manure to the roots of gooseberry and currant bushes, as a prevention to the ravages of the Caterpillar, and if so, with what success.

POTATOES (An Old Subscriber).—The *Ash-leaved Kidney* is early, prolific, and keeps well. Your potatoes that were diseased being a late ripening variety, is enough to account for their being diseased, whilst the early ones escaped, although the ground for the latter was manured. At the same time, let us repeat, that general experience agrees that dung, or other stimulating manure, applied to the potato crop, increases the murrain upon it. An answer to your other query next week.

MURK DUCKS (C. B. C.).—We cannot say where these are to be purchased. But see *Advertisement*.

WORK ON POULTRY (H. H., Dublin).—The work mentioned at p. 156, will be a separate publication, with coloured plates.

MALE BLOSSOMS OF CUCUMBERS (Claude Melnotte).—In reply to your enquiry whether Mr. Rust is correct in his practice, stated at page 187, in taking off "all male blossoms, as they are of no use, except when seed is required," we will reprint the testimony we gathered together some years since. That impregnation is absolutely required, where seed is to be obtained, no one disputes. Mr. W. P. Ayres says, that so far as the production of fruit is concerned, impregnation is "neither good nor harm," and cites, in proof of this, a brace of fruit, which he cut on the 8th of February, 1840, each nineteen inches long, which had never been impregnated; for, at the time the female flowers expanded, there was not a male blossom on the premises, and consequently no impregnation could take place. Since that time he has cut hundreds of fruit, the flowers of which never expanded, and the same has been done by several of his acquaintances. In fact, Mr. Wilson, Mr. Spivey, Mr. Judd, and the Messrs. Ayres, will undertake to procure, at the May *fete* of the Horticultural Society, from ten to twenty brace of fruit, as good as can be obtained by impregnation, the flowers of which shall be removed from the fruit before there is any chance of their being impregnated. Where long fruit is desired, Mr. Ayres thinks impregnation positively injurious, because, if seed is the result of impregnation, the energy of the plant will be expended in perfecting the seed, instead of in the production of fruit, as every practical man knows that the production of one seed from it will weaken the plant more than a dozen fruit fit for table. There are instances in nature of plants perfecting their fruit without impregnation, as in the different varieties of figs; and why not the cucumber do the same? Another practical gardener, Mr. Kyle, says, some years ago, as he was pegging down some plants, he broke the flower off the fruit, at least four or five days before it would have expanded. He left it, however, and, to his agreeable surprise, it swelled off as handsome a fruit as any he had during that season. From that time he has never taken the least trouble respecting impregnation, unless when wanting to save seed. Mr. W. Charlton gives similar testimony, for he says, some of the finest fruit he ever grew never opened a blossom. In one instance, he broke off the unexpanded corolla, and the end of the fruit, notwithstanding which the fruit swelled, and was eaten at table (*Gard. Chron.*). Such testimony as this is unimpeachable as far as it can possibly be carried; which is no more than this, cucumbers unimpregnated have been known to attain a good size and perfection. But it by no means refutes the opinion, that, to be most certain of a fruit not falling immaturely, one condition is that it should be impregnated.

OUT-MANŒUVRING THE SPARROWS.—N. W. M. says—"The following hint may be acceptable to some of your readers. I reside a short distance out of Dublin, and am infested with an innumerable quantity of sparrows, who contend with my fowls for the food thrown to them. I feed my fowls principally on oats, one-fourth of which was, I conceive, daily consumed by the sparrows; it was useless to think of driving them away, I only frightened my cocks and hens, who took greatly longer to return to the food than the said sparrows. Lastly, I was obliged to get my oats bruised, as my horse, like myself, is getting cold, and, to my joy, I find that I have completely nonplussed the sparrows. You are aware the sparrow always shells the oat; in its bruised state they find this impossible; and they now content themselves with the few oats that happen to have lost the shell; and since I commenced with the bruised oats, I have not one sparrow for the dozens I had hitherto, while my fowls were equally well pleased with the oats in the bruised state."

SALE OF COCHINS (Le Chant de Cochon).—We cannot publish what you ask; the birds, though good, were not of sufficient mark to claim the

distinction. The catalogue gives you the pedigree, and your stud book should be always in your pocket.

NAMES OF PLANTS (Notice).—Your Orchids are, No. 1, *Sophranitis cernua*; and, No. 2, *Dendrobium moniliforme*. No. 3, *Lycopodium denticulatum*. No. 4, *Satureja montana*, or Winter Savory. (H. B.)—Your white flower, we think, is *Epactis hyacinthiflora*; and the leathery-leaved one *Piper glabrum*.

CALENDAR FOR JANUARY.

ORCHID HOUSE.

AERIDES, Saccolabium, Vandas, and such-like Indian plants, give water to once during the month. **AIR.** In this first month of the year we frequently have severe frosty nights, and clear, bright, sunny days. The heat necessary to keep out the frost, and the bright sun, will raise the temperature of the house too high; to lower it to the right pitch air must be given, and the apertures to give air ought to be so placed that the cold air does not rush in directly upon or through the plants. The best place for the openings is directly opposite the pipes; the air then becomes heated in a degree before it reaches the plants. **BLOCKS:** plants on these will require attention; any that are loose should be refastened; cleanse the leaves and pseudobulbs from green scurf and all kinds of insects. **CYRTOPIDIUMS,** see to; if any fresh growth is observable, repot in a rich compost. **DENDROBIUMS,** remove into a cool house; such as show growth may be potted and kept moderately moist. **HEAT:** keep both the houses to the lowest point of heat for the first half of the month; as the days lengthen allow the heat to increase a few degrees. **INSECTS,** continue to destroy. **MOISTURE:** on sunny days sprinkle the walks, walls, and pipes, two or three times a day. **PHAIUS GRANIFLORUS,** now flowering, give plenty of water, and, if convenient, plunge the pots in a bed of heated leaves, or tanner's bark. **POTTING,** continue to perform upon all orchids beginning to grow. **SOILS,** procure, such as fibrous peat and turfy loam; lay them in a place to dry, to be ready for the general potting next month. **SOBRALIAS,** place in a cool house; heat 55° by day, and 50° by night; cut down all the shoots that flowered the preceding summer to allow room for the young shoots; keep them quite dry while at rest. **STANDHOEAS** in baskets, if growing, slip in tepid water. **SPRINGES** blocks, as directed last month. **WATER** at the roots, apply carefully; do not wet the young shoots. T. APPLEY.

PLANT STOVE.

See last month. Prepare a hotbed, &c., to strike *cuttings* in. **CLIMBERS** beginning to grow, tie in. **ERANTHUMS,** and other winter-flowering plants, give manure water to occasionally. Turn *fan-beds*, and renew the heat by adding fresh bark. **Pot a second batch of Achimenes, Gesneras, and Glorinis,** to succeed those done last month. Give moderate supplies of water till they begin to grow. The heat of this house must still be kept low, as too much excitement will, for want of light, cause the plants to grow weak, and the young leaves to come yellow. **SEEDS** of stove plants, sow, &c., giving only one watering till they begin to appear. **Hard-shelled seeds** steep in water heated to 180° or 200°; leave them till the water cools. **SPONGE** all large leaves, to clear off dust and insects. **SURFACE-STR** the earth in pots, and clear off weeds and moss, and add a top-dressing of fresh compost. T. APPLEY.

FLORISTS' FLOWERS.

AIR. Whenever the sun overcomes the frost draw off the lights, it will refresh the plants much; if kept on the plants will begin to grow, and will be more liable to suffer from close covering during severe weather. In dull, humid, mild weather, give air at the back or sides by tilting up the lights. **ANEMONES** may yet be planted; choose a dry day for the purpose; cover the tubers with a thin layer of white sand. **AURICULAS** and **POLYANTHUSES,** dress off decayed leaves; search for slugs in the frames and under the pots. **CARNATIONS** and **PICTURES,** water when dry; pick off decayed leaves. Any leaves not decaying, but showing spots on them, remove; it is the plague of these plants. **CHRYSANTHUMS** now partially at rest, water once; any advanced shoots cut off, and make cuttings of; those out-of-doors place a slight covering of tanner's bark round, to protect them from frost. **CINERARIAS** will now be showing flower; water when dry; pot seedlings; repot young, small plants, struck late, to encourage growth. **CALLIOLEARIA** seedlings, pot off from pans; repot young plants; give plenty of air to; smoke frequently, to destroy green fly; attend closely to watering, and avoid wetting the leaves; pick off daily all decaying leaves, and clear the surface of the soil of moss. These are, as the term is, *miffy* plants, and soon lost, without great care through this month. As the frost in this month is often very severe, apply **COVERINGS** of sufficient thickness to keep it out; light, open material, such as fern or straw with a single mat over it to prevent it blowing about, is better than a covering of three mats laid close upon each other. **DAHLIAS,** examine, and clear away all decaying tops or bulbs; any roots quite gone throw out at once. **FUCHSIAS:** as soon as shoots are made half-an-inch long, slip them off, and put them in sand under hand-glasses to strike; these early short cuttings, or slips, strike easily and quickly. **HOLLYHOCKS:** should the weather be open, plant them out; if not already done, the sooner this is done the better chance there is to have a good bloom. Use hoops and mats over the **TULIP** and **HYACINTH** beds in severe frosty or heavy rainy weather. **LOEBELIAS** (Tall), keep from severe frost, and moderately dry. **PANSEES** in pots, look to, and water gently when dry; search frequently for slugs; those in the open air, in mild weather close the earth (loosened by frost) to the plants; if open weather, give a top-dressing of decayed leaves and a little soot. **PINKS:** after the frost is gone press the soil to with the hand firmly, or they will be thrown quite out of the ground. **RANUNCULUSES** may be planted, weather permitting, the last week in

the month (see former number of THE COTTAGE GARDENER as to the manner); water, give none in frosty weather, but as soon as a change takes place apply it early in the morning of a fine day. VERBENAS, give air to; trim off decaying leaves and mould; stop such as are growing and drawing up weak. T. APPELEY.

FLOWER GARDEN.

ANNUALS in borders, keep free from fallen leaves or other litter; and, if the weather is fine, sow a few more at the end of the month. BUTES, see that mice or rats do not get to them: fresh soot keeps them off for awhile. CUTTINGS, of various hardy deciduous shrubs, climbing roses, and the like, may yet be put in. EDGING, see that they are in good order; slate edgings are the best, then box: either may be laid this month. If the soil is dry at the end of the month, plant some GLADIOLI, such as *Pottianus*, *Gaudensia*, and their varieties, and continue in monthly succession to the end of April. Forget not to procure such *staken*, *rosa*, *pegs*, and *lilies*, as may be wanted next summer, in time. Destroy *rats*, mice, and other creatures destructive to seeds and roots. Again look at the protected plants, to see they are dry. GRASS, keep it clean and well rolled. Hedges, evergreen and otherwise, may yet be planted and dressed. LAYERS of evergreens, or deciduous shrubs, may be made as the borders are cleaned. MANURE, in composts apply to such flower-beds as may require assistance; and in a solid, rotten state to all roses. MULCH all newly-planted trees, &c. POTTED PLANTS in reserve garden secure from frosts. PLANTING, push forward in mild weather. PRUNE, make cuttings of the young shoots for increase. PRUNE and regulate every tree or bush which requires it; be more sparing with evergreens. MANUCULUS, if the soil be dry, plant a lot for another succession. ROSES, prune, plant, and dung, if not already done; protect *Tea* and young *Houbrans* and wash them with strong lime and soot paint, to kill moss and insects. SEEDINGS, and all young plants, protect according to their hardiness and strength. SUCKERS, pull up and destroy, unless wanted for increase, as those of some roses, &c. TRENCH vacant ground. WALKS, roll as soon as they are dry, after rains or frost, and keep them regularly cleaned. WEEDS, destroy everywhere. WHEELING, reserve for frosty or very dry weather. Four times, within our memory, after unusual mild weather to the middle of January, we experienced severe frost and rough weather; provide against another of these trials in time, and see that everything is ready for securing a supply of ice at the first opportunity. D. BEATON.

ORCHARD.

APPLES, cleanse from blight, moss, &c.; brine and soft soap are good for such purpose. BUSU-FAUIT, plant, prune. COMPOSTS, procure and prepare. CHERRIES, plant, prune. CUTTINGS, plant of Gooseberries. Currants, &c. CHESTNUTS, plant. DRESS all border. FIGS, protect. FRUIT-TREE, look over weekly; be sparing in giving air; remove decaying fruit, and keep the room dark. FILBERTS, plant. FOK, borders. GOOSEBERRIES, plant, prune. LAYERS, make. LOAM, procure for stations. MULCHING, perform. MILBERRIES, plant. MEDLARS, plant. NAILS and Shreds, dress. NECTARINES: See *Peaches*. PLUMS, plant, prune. PEARS, plant: prune ordinary kinds. PEACHES, plant, prune, train, and dress. PLANTING in general proceed with. STATIONS, make. TRAINING in general proceed with. TRENCING, carry on. TREES, stake. VINES, prune and train. WALNUTS, plant. WALL-TREES, in general prune and regulate. WASH, the following may be applied to walls: two-parts soot, two-parts sulphur, four-parts lime, applied with a brush into every crevice, urine or soap-suds, or both, may be employed to mix with. R. ERRINGTON.

FORCING-HOUSE.

AIR: See *Ventilation*. ASPARAGUS, get out succession-beds on mild heat. APRICOTS: See *Peach*. BOTTOM-HEATS, sustain and assist, 70° to 78°. CUCUMBERS, top, dress, train. CHERRIES: See *Peach*. COVERINGS, use where possible, to save fire-heat, and to protect from extremes. FIGS: See *Peach*. FIGS, use discreetly. GLASS, wash all roof. GRAPES, ripe, use fires and air liberally, remove decaying berries. INSECTS, extirpate; use fumigation, the sponge, and soft soap. KIDNEY-BEANS, pot, and provide successions. NECTARINES and *Peaches*, in bloom, air liberally, and shake to disperse the pollen. MUSHROOMS, protect well, if out doors; in house, use much water on floors. PINKS, continue to sustain proper heat to, cover well in dung-pits, and remove linings. PEACHES: See *Nectarines*. ROOTS, protect in boxes, tubs, &c. STRAWBERRIES, give air and light, use liquid-manure where blossoming; introduce successions. TARRAGON and other herbs, introduce to heat. VENTILATE as freely as you daft. VINEY (Early), proceed steadily; keep a moist air; raise the heat at blooming-time; use sulphur against mildew. WATER, always use in a tepid state. R. ERRINGTON.

GREENHOUSE.

AIR, admit at every favourable opportunity, whenever the temperature outside is above 35°, except in windy or foggy weather, especially among Heaths, Epineas, and Azaleas that you do not wish to bloom early. In foggy weather, though warm, it will be advisable to put on a little fire, to change the visible to invisible vapour. If the fog was of short continuance, and could be kept out of the house, air might be dispensed with, as well as fires, though it should not be forgotten that the motion given to the air by a little firing is a great security for the health of the plants in dull weather. Soft-wooded plants should be kept at one end of the house. BUCKS and hardy SHRUBS, such as *Lilacs*, *Azaleas*, and *Roses*, introduce from the forcing-house, placing them at the closest and warmest end of the house; *Calceolarias*, *Cinerarias*, *Geraniums*, and Chinese *Primroses*, clean, shift, and supply at times with manure-water. CAMELLIAS and CYTISUSES opening their buds, supply with manure-water. CLIMBERS, prune in, if not already done, those that produce their flowers on the young wood; others, such as *Kennedys*, now flowering and growing, attend to; and especially train, every day, the *Tropaeolum*, if you wish to prevent confusion. No time should be lost

in potting such kinds as *Tricolorum*, *Jarvattii*, *Speciosa*, *Aurea*, &c., if not already done. FIRES, light in close, dull weather, to enable you to give a circulation of air. Beware of heating too much when frosty, as, without due precaution, the atmosphere will be too dry; it is better to use coverings for the glass. This is more particularly to be attended to, after the dull moist weather we have had. FUCHSIAS: the forwardest may now be pruned and repotted. GERANIUMS and CINERARIAS will, in all likelihood, want cleaning and fumigating. The first may now be repotted for late May and early June blooming, and the latter must be shifted and kept growing, so as to prevent them throwing up flower-stalks, if late bloom and large specimens are desired. Where room is limited, a fine display is obtained by successions, and using not larger than six-inch pots. Not a withered leaf, nor an aphid, should stand longer than when seen. When the fly covers a leaf in myriads, smoking with tobacco then, is tantamount to labour and money thrown away. ROSES in pots, for April and May and June blooming, in the greenhouse, finish pruning; wash with a paint of soot, sulphur, and clay; top-dress with rich compost; and plunge, if possible, in a house or pit—sawdust will be a good material—and give at first a temperature of 40° to 45° at night, and from 45° to 55° during the day. SUCкулENTS, unless growing and showing flower, refrain from watering. *Tropaeolum Lobbianum*, and *Manettia bicolor*, will be great ornaments now, in a warm dry greenhouse. WATER plants only when requisite, and perform the operation after breakfast, using water rather higher than the medium temperature of the house. Place a few Achimenes, Geaner, and Gloxinia roots into heat for early blooming. In a conservatory or greenhouse, where no hard-wooded plants to speak of are grown, and where a medium heat of 50° can be maintained—that is, 45° at night, and 55° during the day—*Poinsettia pulcherrima*, *Euphorbia Jarquiniflora*, &c., may be introduced from the stove. For the *Poinsettia*, especially, if a little extra heat can be given in April, a close cold pit in summer, an average night temperature of 50° in October, and a medium of from 45° to 55° in winter, nothing can surpass the brilliancy of the large crimson floral leaves, for a couple of months, at this period, while the brilliancy remains longer in such a house, than in a plant stove. (See *Calendar of last month*.) R. FISH.

KITCHEN-GARDEN.

ARTICHOKES, attend to, shelter, &c. ASPARAGUS, plant in hotbed; attend to that forcing; temperature about 65°, and at night 50°. BEANS, plant, b.; earth-stir among often; advancing crops protect from frost; plant in hotbed, if required. BRET (red), plant for seed. BROCOLI, protect from frost. CABBAGES, plant, c.; sow, c.; plant for seed. CARDOONS, attend to, shelter, &c. CARROTS, sow small crop; plant for seed; (early Horn) sow on gentle hotbeds, fill the frame up well with earth, so as to bring the crop up close to the glass; attend to early thinning-out, and earth-stirring with a little pointed stick among all frame crops. CAULIFLOWERS in frames, attend to protection from frost, and give all open air possible in open weather, by taking the lights entirely off; also, hand-glass crops, clear away all decayed leaves and slugs, and earth-stir often; if young plants are required, a pinch of seed may be sown in pans, and placed in any heated structure, but have a gentle hotbed made up ready to prick them out upon, keeping the young crop up close to the glass. CELERY, earth up, shelter, &c. COMPOSTS, prepare and turn over. CUCUMBERS, sow and prick out; temperature, by day, 70° to 75°, and at night 65°. DUNG, for hotbeds, prepare in earnest; wheel on to vacant ground. EARTH for hotbeds, prepare. EARTH-STIR, and fasten plants disturbed by frost, &c. ENDIVE, blanch, protect. FROST, protect plants from, by temporary covering. GROUND, trench vacant. HORSE-RADISH, plant at any time during the month in open weather. HOTBEDS, make and attend to. JERUSALEM ARTICHOKES, take up and replant in open weather, at any time during the month. KIDNEY-BEANS, sow in succession in hotbed, &c. KALE (Sea), attend to; force in succession. LETTUCES, in frames, attend; protect from frost; sow on warm border, c. LIQUORICE, plant, c., and dig up three-year-old. MELONS, sow, for fruiting in May; day temperature 75°, night 65°. MINT, force, in hotbed. MUSHROOM BEDS, make, and attend to those producing; procure horse-droppings for. MUSTARD and CRESS, sow in hotbed. ONIONS, clear from weeds; examine stored; sow a small crop, c.; plant for seed. PARSLEY, sow, c.; protect from frost. PARSNIPS, plant for seed. PEAS, protect from birds by straining a single string of worsted along over the row; attend to the early pea sowing as near the first of the month as possible. It is a good maxim to always have a mouse trap or two set about the pea quarters. Sow; earth-stir; shelter from frost; and prepare sticks. This is a good season for making main sowings of early and second early peas where the soil works well and the weather is open. POTATOES, plant in slight hotbed; and they may also be planted out in the open border, or quarters, in fine open weather, where the soil works well. Examine those in the store. RADISHES, sow, in hotbed; thin out as soon as the plants can be handled, and sift a little dry earth among them; sow in border, c. RAPE (for salading), sow in hotbed; (edible-rooted,) sow. RHUBARB, attend to; force, either in pots, to be planted in some heated structure, or covered up with pots or tubs and fermenting materials. SALADING (Small), sow. SAVOY, plant for seed. SPINACH, keep clear from weeds and fallen leaves; make a small sowing toward the end of the month. TANSY, plant in hotbed. TARRAGON, plant in hotbed. TURNIPS, plant for seed; should the weather seem inclined to set in severe, store in a good supply, or heap them and cover them over with coal-mashes. WEEDS, continually destroy, and do any work which will lessen that of the following busier months; in particular, such as planting all the main out-door crops of potatoes wherever the soil will allow of it, and the weather is favourable. WOOD-LICK, destroy in the mushroom-house by trapping under dry hay, and scalding it in hot-water; or by baiting small pots with boiled potatoes, or slices of potatoes under dry moss. T. WEAVER.

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MASON'S PHEASANTRY.

Cochin-China, Malay, White-faced Spanish, Minorca, Gold Pheasant, and other Fowls for sale. Substrains: Lace-Necked Gold and Silver Bantams, Watoli Ducks, Gold, Silver, and Common Pheasants, Carriers, and other Fancy Pigeons, &c. Apply to TIMOTHY MASON, King's Cottage, North End, Falmouth, London. Near Hammamsmith Gate.

Eggs for hatching of Cochin-China and Spanish Fowls early in January, 10s for 12, warranted; and of Speckled Dorkings, and most other esteemed breeds, shortly after, forwarded on receipt of P. O. order. Letters to enclose stamp.

COCHIN-CHINA FOWLS' EGGS,

from very choice Birds, bred from Mr Sturgeon's Stock. Both Cock and Hens are Birds of great merit, are all light-coloured, and well-feathered Birds. Price 12s 6d the Dozen, Carriage paid to London on receipt of Stamps or Post-office Order, payable to AETHUR MORNCASTLE, Grays, Essex.

TO BE SOLD.—A few good and

well-bred Cock birds of the silver-pencilled Hambro' breed, price 6s each, including hamper and delivery at the Station at Nottingham. Apply, by letter, to Mr. NUTTALL, to the care of the Normanton Post, at Nottingham.

SONG-BIRDS—Messrs JESSOP,

BROTHERS, Florists, &c., Cheltenham, have now a good selection of Belgian and other Canaries, in full song. Price 10s 6d each, travelling cage included.

Also, a few very handsome Pied Goldfinch Males, 30s each.

A General Collection of Foreign and other Cage Birds.

TO AMATEUR GARDENERS,

Local Boards of Health, and Sanitary Works.—PATENT GLASS TUBES, Iron Coated with Glass, Gutta



Percha, Combed ditto, Patent Flexible India Rubber Tubing, and every other Hose for Watering Gardens. The Hydraulic Ram, Fire, Garden, and every other kind of Pump, Sluice Cocks, Hydrants, High Pressure Cocks, and all other articles, to be had, Wholesale and Retail, of FREEMAN ROE, Hydraulic Engineer, 70, Strand, and Bridgefield, Wandsworth.

P.S.—Important to Farmers, &c.—F. R. begs leave to call attention to his new Water Power, which in many cases will supersede the use of the Steam Engine.

HOLLOWAY'S OINTMENT AND

FILLS.—AN EXTRAORDINARY CURE OF A WOUND IN THE FOOT.—Extract of a letter from Mr. Thomas Roe, Druggist, of Whitton, dated September 26th, 1882. "To Professor Holloway. Sir,—Alexander McFadden, son of a gamekeeper residing in this town, had a scrofulous sore in his foot for four or five years, which discharged very much. Almost everything was tried in the hope of healing it, but without success, and when he was brought to me, I recommended a trial of your Ointment and Pills, and am happy to say they have healed all the sores, and effected a perfect cure of the foot. The father and son are prepared to con- firm this statement."

Sold by all Druggists, and at Professor Holloway's Establishment, 84, Strand, London.

TORQUAY POULTRY EXHIBITION.—The above Exhibition will be held (by permission of Sir L. V. FALK, Bart.) in the Market Place, Torquay, on Friday and Saturday, the 19th and 20th of January, 1884. Under the Patronage of

Sir John Y. Butler, Bart., M.P.
 Sir Ralph Yarnall, Bart., M.P.
 Sir Walter F. Carew, Bart.

Vice-Adm. Sir J. Louis, Bart.
 L. Falk, Esq.
 E. S. S. Cary, Esq.

C. H. Mallock, Esq.
 I. E. Brunel, Esq.
 J. Belfield, Esq.

A Subscriber of 10s will be entitled to Five Tickets of Admission (not transferable), available for both days. A single ticket, 2s 6d. The holders of tickets only will be admitted the first day, from one to four o'clock. The Exhibition will be opened on the morning of the second day, from eight to ten o'clock, on payment of 6d, and from ten to three o'clock at 1s, when it will finally close.

N.B.—Price Lists may be obtained from the Secretaries, to whom all communications and specimens must be addressed, at No. 13, Strand, Torquay, postage and carriage paid, and an enclosure of postage stamps where an answer is required.

Prizes to the amount of 400s will be offered, the greater portion open to all competitors, including an Extra Premium of 25s for the Best Pou of any description of Poultry.

Torquay, Dec. 6th, 1883.

A. PAUL,
 J. C. STARK, } Hon. Secretaries.

HOME-GROWN SEEDS. CARRIAGE FREE.

SUTTON'S COLLECTIONS OF GARDEN SEEDS.—The superior quality of our seeds is plainly testified by the numerous orders we are daily receiving from parties who have had them in previous seasons, very many of which contain remarks, such as the following—

Extracts from Letters now before us, which may be seen at our Office.
 (The names of the writers may be known by post, if required.)

From Withycombe Rectory, "Taunton, Nov. 18, 1883.—"I was so much pleased with the selection of Seeds sent by you, that I recommended two of my friends to take parcels from you."

From Darnhall, "Middleton, July 27, 1883.—"Lord E. begs to enclose Messrs Sutton and Sons a cheque for the amount of their account, and requests acknowledgment of it. The Seeds sent this season have given great satisfaction."

From Whiteshill Parsonage, "Stroud, March 26, 1883.—"I am more than satisfied with the assortment of Seeds you made for me, and with

the quantity which you sent; and I consider that I have done better by leaving the choice to you than selecting for myself."

From Brecon, Nov. 6, 1883.—"I beg to offer you my commendations of the Seeds you sent me the two last seasons, nothing could be more true or better."

From Broms Meurus, "Glasgow, Nov. 15, 1883.—"The Seeds received last season turned out admirably, all being of first-rate quality."

From Lortham, "Bideford, Oct. 2, 1883.—"I know two parties who want to get some good Seeds. I have recommended yours, as I have provided them to be good the last two years."

The very best kinds of seeds in cultivation may be obtained at 30 per cent less than the prices charged in most parts of the kingdom, by ordering one of the under-mentioned "Complete Collections."

SUTTON'S COLLECTIONS OF GARDEN SEEDS.

CARRIAGE FREE.

- No. 1.—A Complete Collection of Garden Seeds for One Year's Supply of a Large Garden; including 20 quarts of Peas, in the best eight sorts for succession, the best sorts of Broccoli, choicest Melons, Cucumbers, Lettuces, Cauliflowers, and every other sort of Vegetable required, and in full quantities. 22 10 0
- No. 2.—A Complete Collection, in quantities proportionably reduced. 1 10 0
- No. 3.—A Complete Collection, equally Choice Sorts. 1 1 0
- No. 4.—A very Choice Assortment for a Small Garden. 0 12 6

If some kinds of seeds are already possessed, purchasers are requested to name them, that increased quantities of others may be sent in lieu of them.

Early Orders are particularly requested, and will have the preference of scarce sorts. Remittances are not required with the orders from clergymen, noblemen, and resident gentlemen, or their gardeners.

A List of the Sorts and Quantities contained in the above Collections will be sent, post free, on receipt of One Penny Stamp.

Address, JOHN SUTTON & SONS, Seed Growers, Reading, Berks.

SEED AND HORTICULTURAL ESTABLISHMENT, SUDBURY,

SUFFOLK. BASS AND BROWN have the pleasure to announce that their Seeds are now harvested in fine condition, and ready for sending out, which they beg to offer as under. Similar assortments of previous years having given such general satisfaction, they again offer them with the fullest confidence.

Vegetable Seeds in assortments. Full particulars of the assortments are given in the Catalogue.

Peas—20 choice, new, and best sorts, one quart of each, arranged for succession	14 0
" 10 ditto, one quart of each	8 0
Broccoli—10 finest sorts, one packet of each, for succession	4 6
No. 1.—Collection of Vegetable Seeds, containing the 20 quarts of Peas, with each of the Broccoli, and all the other seeds in proportion of the best and choicest sorts	3 0
No. 2.—Collection in smaller quantities	10 0
No. 3.—Ditto	3 0
No. 4.—Ditto of selected kinds for small gardens	0 8

Our New Seed List for 1884, may now be had, which comprises the former part of our general Catalogue, the whole of which will be ready early in January. The Autumn Catalogue (supplied for three postage stamps) contains select new plants, Roses, Shrubs, Hardy Herbaceous Plants, Fruit Trees, and Flower Seeds, &c. Post Office Orders payable to STEPHEN BROWN. Remittances requested from unknown correspondents.

ESTABLISHED NEARLY HALF A CENTURY.

WEEKLY CALENDAR										
JANUARY 6-12, 1857.										
M. W. D.		WEATHER, FROM LONDON IN 1857.				Sun. Morn.	Sun. Evng.	Moon. R. & F.	Mars. R. & F.	Day of Year.
		Barometer.	Thermom. (Fah.)	Wind.	State of Sk.					
6 Tm	EPHRAIM. Twelfth Day.	30.919—30.767	49—53	S.	—	7 a. 8	8 a. 4	4 24	30	6 15
7 W	<i>Adiantum species</i> ; ponds.	30.883—30.800	50—57	S.W.	98	7	8	4 48	30	6 48
8 S	<i>Dytiscus marginalis</i> ; ponds.	30.881—30.181	50—57	S.W.	99	7	8	7 6	30	7 7
9 SUN	SUNDAY AFTER EPIPHANY.	30.466—30.148	50—55	S.W.	—	6	8	actg.	30	7 23
10 M	<i>Dytiscus punctulatus</i> ; ponds.	30.714—30.608	49—53	W.	98	6 5	11	5 a. 3	17	7 57
11 Tu	<i>Hydrous piceus</i> ; ponds.	30.310—30.428	51—48	W.	97	5	12	5 16	8	8 21
12 W	<i>Sarothrum muticum</i> .	30.328—30.381	54—55	S.W.	93	6	13	7 34	8	8 44

METEOROLOGY OF THE WEEK.—At Chislewick, from observations during the last twenty-five years, the average highest and lowest temperatures of these days are 49.3° and 30.3° respectively. The greatest heat, 54°, occurred on the 7th in 1845; and the lowest cold, 8°, on the 6th in 1841. During the period 113 days were fine, and on 69 rain fell.

BRITISH WILD FLOWERS.

POPPY-WORTS.—PAPAVERACEÆ.

PAPAVER. POPPY.

(Continued from page 215.)

Section II.—Poppies with smooth capsules.

PAPAVER DUBIUM: Long Smooth-headed Poppy.



Description.—This is an annual, and so much resembling the species which we shall next describe, *P. rhæas*, as to be frequently mistaken for it. *Stem* many-flowered, about two feet high, woolly at the lower part, but more bristly towards the top, the bristles on the seed-vessel stalks lying close to them, and whilst young of a beautiful silvery appearance. *Leaves* doubly pinnatifid, with the edges and mid ribs hairy. *Capsule* on seed-vessel smooth, length much greater than the breadth, wider at the top than at the lower part, angular; rays of the stigma on its summit from six to ten. As the capsule ripens its lower part separates from the lid sufficiently to allow the ripe seed to escape without their being exposed to wet in the capsule. *Petals* broader than they are long, light scarlet, but paler than those of any other of our red Poppies. *Stems* line-like; *pollen* yellow.

Places where found.—In fields where the soil is sandy.

Time of flowering.—June and July.

History.—Its name *dubium*, doubtful, alludes to the uncertainty first felt whether it differed from *P. rhæas*, but

the doubt no longer is entertained. Jacquin has described a white-flowered variety having a dark purple spot at the bottom of each petal, but this has never been discovered in Britain. About Shaohkin Chine, and other parts of the Isle of Wight, is found a very hairy, or shaggy variety, as represented in Christian's *Flora Danica*, 802. The calyx is studded with large transparent globules, with a bristle springing from out of each. The capsule is nearly twice as long as it is broad, being longer than in *P. rhæas*, but shorter than in the species, *P. dubium*. (Withering. Martyn. Smith.)

PAPAVER RHÆAS: Corn Poppy; Red Poppy.

Description.—This, the commonest of all the Poppies, is an annual. *Stem* from one to two feet high, upright, cylindrical, branched, purplish at the lower part, clothed with spreading tawny-coloured hairs, having bulb-like bottoms. *Leaves* stalkless, rather sheathing the stem, hairy on both sides, pinnatifid, with the segments unequally toothed, each tooth rolled back at the edge, horny at the top, and ending in a small spine. *Flower-stalks* long, cylindrical, upright, single-flowered, clothed with hairs spreading horizontally. The two sepals of the *Calyx* bristly, and skin like on the edges. *Petals* bright scarlet, often black at the bottom. *Capsule* urn-shaped, smooth, with a convex stigma, purplish, and ten or twelve-rayed. Capsule marked with as many raised lines as there are rays to the stigma. *Seeds* dark purple.

Places where found.—In fields everywhere, being a troublesome weed.

Time of flowering.—June and July.

History.—*Rhæas* is the Greek for a wild Poppy, and of them all this is the most common all over Europe. In this country its universal prevalence has subjected it to various local names, among which are (orn-rose, Cop or Cup-rose, Canker-rose, Red-weed, Head-wark, Red-naillies, &c. In Shropshire and Staffordshire it is said to be very rare, its place being taken by *P. dubium*. Garden culture has raised from it many beautiful varieties, all of which, as well as their parent, are remarkable for their large flowers being packed so compactly as to be contained in a comparatively small flower bud. From the petals of the wild species the Draper Bee (*Apis papaveris*) prepares the hangings of her apartment. She dexterously cuts out the petals when about half expanded, straitens their folds, shapes them to her purpose, and lines with them the cell that is to be the abode of her offspring.

The petals of this Poppy give out, when soaked in water, a beautiful crimson colour, which is named from them *Uguiccol*—this being the French name for the flower. The petals have a narcotic smell, and a slightly bitter taste. When dried they have a wine red colour. The dyeing is effected with difficulty, and when dried they must be kept in a very dry place. They are chiefly used in making Syrup of Red Poppies, which may have a very slight soothing effect; and foreign medical men prefer to opium an extract from the capsules of this plant. (Martyn. Withering. Smith. Duncan.)

In whatever degree, either as regards mere numbers, or their relative merits, the Poultry Exhibitions of the year 1852 may have exceeded those of 1851, there can be little doubt but that 1853 will witness a still further

increase of the public interest that has hitherto been so liberally accorded to them.

With this prospect before us, it may be useful to consider how far our present arrangements for these

may be capable of improvement, as to render them still more effective, in promoting the general importation of better breeds of domestic poultry.

Apart from all controversy, as to whether Shanghaes, Spanish, or Dorkings, may prove the most economical race for general purposes, it is evident that mere fancy, and the gratification of individual taste, would long ago have failed to support the present ardour for poultry-keeping, had not the further inducement of a good return for money so invested been realized wherever judgment and attention were duly combined. If ten guineas, twenty guineas, and thirty guineas were readily paid at Birmingham, for the choicer pens of Shanghaes, the ticket "Sold," was also appended to a very large majority of the Dorkings, and with an eagerness, too, that showed that the original outlay, though merely for farm-yard stock, was regarded as a profitable investment. Thus Game Fowls, the different varieties of Hamburgs, Geese, Turkeys, and Ducks all participated in the general verdict of approbation passed on that occasion, and which stamped that Exhibition with the character of practical utility. The most economical production of eggs and fat chickens, then, appeared to be no less the calculation of buyers, than symmetry of form and beauty of plumage.

The column of THE COTTAGE GARDENER, which may contain the Exhibition days of the Poultry Societies for the present year, 1853, will, therefore, we anticipate, be greatly extended. But, at the same time, care should be taken not too far to subdivide the districts which are to be included within the area of the several operations. Such subdivision is an error the more to be guarded against, since its ill effects have long been visible in the case of many local Agricultural Societies, where they have so multiplied, that towns in the immediate vicinity of each other have each their separate meeting. The objections referable to the one case are equally applicable to the other; and not to go through what might be made a long catalogue of errors in such practice, it will be sufficient for our present purpose to observe, that in such cases, stock, whether Oxen, Sheep, Pigs, Horses, or Poultry, labour under the disadvantage, that instead of being placed in comparison with the picked birds of adjoining counties, they are, in too many cases, competitors only with their near neighbours. The consequence is inevitable, and in Agricultural Societies has been very generally admitted. Exhibitors, if victorious, are too apt to rest satisfied with their local laurels, while, if unsuccessful, they aim at no higher mark than their more fortunate neighbour has already attained to. In either instance, that progressive improvement, which year after year should bring about, is wanting, and one most important end in the institution of these Associations falls to the ground. Hence the great advantage of a meeting such as that which has just been held at Birmingham. Not one county only, not even the Northern, Southern, Midland, Eastern, or Western divisions of England, were there alone represented, but from Cornwall to Essex, and from Hampshire to Yorkshire, competitors of high taste entered the

list. The rivalry in such an assemblage may well, therefore, be regarded as inducement for our present imitation, whatever further development of excellence future years may effect. Every poultry-keeper, therefore, would find it answer his purpose to make a yearly excursion to Birmingham, or some of the other large exhibitions, and if, hitherto, he has thought sufficiently well of his own or his neighbour's stock, he will probably, on his return from thence, admit that improvement is at least possible; however previously unwilling to believe that such could be the case.

The conclusion of the present year, we are told, is likely to witness the institution of a Metropolitan Poultry Show at the Baker-street Bazaar, under the most favourable auspices both as to patronage and exhibitors. No locality can be better suited for this purpose, and under good management it can hardly fail of success. But wherever new Societies are, or soon may be in course of formation, it will be but prudent on the part of those who are interested in them, to consider that the great element of success will depend on the area chosen for their operations. Now, speaking generally, if each English county had one such annual meeting, the interest and success of poultry keepers would, we believe, be best advanced. Some, indeed, of the larger counties, such as Yorkshire, Cornwall, and Devonshire, might be divided, but Rutland and the smaller counties might be united with adjoining ones, and the total would thus remain about the same. There would be many advantages from such an arrangement, which would occupy too long a space for the present enquiry; the one objection, however, to which alone we have now adverted, is at least worthy of our best consideration.

Let us now turn to another point. The time of holding these meetings, November and December, will, of course, be the months most to be desired for this purpose, and for "County" Shows, if we may use this term as distinguished from the Birmingham and the future Metropolitan, it will be desirable so to arrange both that they may not clash in points of time, as also that just such an interval may intervene between them that birds exhibited at the one, may best be enabled to be presentable at the other. In counties far distant from each other this may not be generally necessary; but in fixing their days it will be prudent, on the part of the managers, to select such as may not interfere with either that at Baker-street, or Birmingham; for, however little they might themselves care for coming into competition with these formidable bodies, they would often find their best birds gone in that direction, and their admission money also fall far short of what otherwise might have been the receipts. Whatever, indeed, we may individually think of these matters, it will be an act of prudence, no less than of courtesy, to give precedence in these two instances. Birmingham, especially, has done much for the poultry world, and we should not prove ungrateful even if competition in this respect were not out of the question, as regarded our own finances.

Exhibitions for *Chickens only*, to be held in August, or the early part of September, are, we believe, in contemplation, and the "Cornwall Society" will probably try the experiment in the course of the year 1883. For such young birds distance would be a most serious objection, and the smaller districts, which might be unable to muster a sufficient number of pens for the regular annual contest for birds of all ages, might thus gain an excellent opportunity for comparing the progress of their different poultry yards; the more so, indeed, as the younger members would suffer no depreciation from the presence of their seniors. At any rate, it will be worth consideration how far such a scheme might be carried into effect, since it would certainly aid in a very material degree in adding to our knowledge of the comparative merits of chickenhood in the different classes.

This leads us to notice the recommendation conveyed in the report furnished us of the late Birmingham meeting, that "old and young poultry should not be shown in the same classes;" and if, as is there suggested, the question as to which will be the best bird at a subsequent day is permitted to influence the judges, our vote should unhesitatingly be given for the summary exclusion of all chickens from the classes assigned to the older fowls. Nothing should be more positive than that the prize-pen should be *that which is best at the actual time of the show*.

But, we imagine, there are very few persons of experience, with fowls of any variety, who, on the eve of a show, where they proposed to exhibit, have not looked with dismay on the tattered plumes and evident ill-condition of many of their older birds at that season of the year, and many a pen would thus have been necessarily unoccupied had not an early cockerel or pullet been at hand to supply the deficiency. A late moulting season, or a prolonged one from unfavourable weather, is constantly productive of these results, and the present popular favourites, Shanghaes and Spanish, are, perhaps, of all others the most subject to this untimely disfigurement. The most hurried glance, indeed, at some of our late exhibitions told this tale most forcibly. While, therefore, we heartily concur with the principle advocated for the separation into distinct classes of the chickens of the year and the older birds, the management of our poultry-yards, must, we fear, be conducted on some more skilful principle than has yet been acted on, if, without a very large flock to select from, creditable specimens, as regards both plumage and other points, will be always forthcoming at that season from among the senior members of our yard. W.

COVENT GARDEN.

WHEN this department was added to the pages of our Journal, and this heading adopted, it was not intended that the subjects treated of should refer exclusively to the great Metropolitan mart; but rather, taking it for our type, we might from it all observations which apply to every phasis of horticultural commerce and finance. And whilst it is our intention to continue to

furnish, as we have done, a faithful and critical report of what goes on weekly in Covent Garden market, we shall also, as opportunity offers, ascertain any subject which has any reference to garden produce. It was in the carrying out of this principle that we commenced the subject of orchard-planting, which has engaged our attention for some weeks past; and the more we think of it, the more we are convinced of the great necessity there is for our suggestions being carried out with as little delay as possible. Scarcely a day passes over our heads but we are experiencing practically, that what we have stated is true, and indeed too true. We have been requested by several country friends to procure, for their enjoyment during this festive season, something in the way of choice fruit as a dessert; and this we have done after much difficulty, but with much greater reluctance, for it is anything but agreeable to have to pay 3s. and 4s. per dozen for *Pears* of very ordinary quality; and that is a low price when compared with some others, which cannot be had under 6s. Such subjects we shall continue to refer to as opportunity offers. But there is another matter which also comes under this department, which has been suggested to us by a correspondent; and we have in our own experience frequently met with cases similar to that of which he complains. As there may be many of our readers similarly situated we shall insert his communication in full.

"Will you allow me to suggest that now and then (say monthly or fortnightly) a list should be given in your paper of the *Flowers, Fruits, and Vegetables*, in season, in order that a numerous class of your readers may not be so completely at the mercy of their servants as at present? For my own part, I know but little about gardening; but paying two men's wages, and by no means stinting the nurseryman's account, I do not like to have excuses in the stead of produce, which I see in the markets can be produced elsewhere. True, some may be of foreign growth; but I fancy if employers like myself knew more about it, their gardeners would make a much better show. If I saw in THE COTTAGE GARDENER that Mushrooms or Brussels sprouts were plentiful, I would take care they should not be scarce with me. But at present, if I am told that those at market come over from Holland, although I may not believe it, what can I say? Gardeners soon find out whether their masters are 'up' to them or not, and act accordingly."

This is written from the suburbs of London, where there is a set of men, falsely called gardeners, continually prowling about—a little time in one situation, and again a short time in another. They never remain long in one place, and they rarely, if ever, entirely leave the locality. They have pot companions and kindred associations, which keep them hovering about as unclean birds hover about carrion; and we very much fear the man of whom our correspondent complains is one of these. Of such, we counsel him to beware. It is such men, as these who bring disrepute on the profession, and, indeed, on all professions; and when we entered

on the publication of our market reports for the information and direction of honest men, we also kept in view the check they would exercise over such unprincipled characters as our correspondent refers to.

Last week we gave some account of the appearance of the market during Christmas week. Pretty much of the same aspect still continues to pervade it. VEGETABLES are still very plentiful, the open, mild season contributing to keep everything in a forward state. SAVOYS realized 1s. per dozen, and are of excellent quality. There are some which are not so fine, which were sold at lower prices. GREENS sold freely at 1s. 6d. to 2s. per dozen bunches. CABBAGES, according to quality, made from 9d. to 1s. per dozen. BROCCOLI, 6s. per dozen bundles. BRUSSELS SPROUTS were plentiful at from 1s. 6d. to 2s. per half sieve. TURNIPS were also plentiful and good at 1s. 6d. per dozen bunches. ONIONS 2s. 6d. to 3s. per bushel, according to the quality. LEEKS, 2d. per bunch. CARROTS, 3s. to 4s. per dozen bunches. PARSLEY, 2d. per bunch. HORSE RADISH, 1s. 6d. to 2s. 6d. per bundle. These include the leading articles, besides which there were several parcels of forced Sea-kale and Rhubarb.

Among FRUIT we have Apples plentiful, and rather a dull sale; but they still maintain firm prices. Good dessert APPLES cannot be obtained under 8s. and 10s. per bushel; some, however, of the small, which have been sorted out, can be had as low as 5s. The baking sorts are much more plentiful than the dessert, and make from 5s. to 7s. 6d. PEARS are very scarce, and are not to be had in quantity. *Passe Colmars, Ne Plus Mouris, and Chaumontel*, make 2s. 6d. to 3s. per dozen of second-rate quality; but for good specimens they realised 6s. per dozen. GRAPES are very short. *Black Hamburgs* 4s. to 8s. per lb.; *Muscat of Alexandria* 12s. 6d. per lb.

The same profusion of EVERGREENS and FLOWERS continues as we reported last week; and as we did not observe anything remarkable besides what we mentioned in our last, we must refer our readers to our previous report.

H.

GOSSIP.

We know so many of our readers would willingly gratify our coadjutor, *Mr. Beaton*, if they had but the opportunity, that we venture to depart from our usual course, and ask those who are subscribers to the *Wanstead Infant Orphan Asylum*, or who know others who are, to aid him in attaining his object, as detailed in an advertisement to-day. The little orphan for whom he solicits votes is entirely dependent upon him for support.

The vine mildew has been so injurious to the Grapes in France, that in the department of Herault, where the country wine sold on an average for forty francs per muid of 700 quarts, it is now selling for 150 francs. The owners of vineyards anticipate that the next vintage will be even more deficient than the last.

Staves to be devoted to the growth of the *Victoria Regia* are about to be erected in the Botanic Gardens of

Belfast and Glasgow. That at the latter town is the more worthy of notice, because the building-fund has been raised by a penny subscription among the artisans of that city. The *Gardeners' Journal* states, from the report of the directors of the Garden, that by the 13th of December nearly one hundred thousand pence had been thus collected.

We recommend to our readers *Hogg's Edging Tiles for Garden Walks*. They resemble the outer moulding of a picture-frame, and combine the three requisites, neatness, durability, and cheapness. The following is Mr. Hogg's description of the edging, published in the "Horticultural Society's Journal," and parties requiring further information may obtain it by writing to Mr. Hogg, 13, Giltston Road, Brompton—

"My first intention was merely to satisfy my own wants; but many friends who saw my edging, and whose opinions in such matters are worthy of consideration, advised me to have it introduced for the general good.

"With this view I have caused some of the tiles to be sent to the Garden of the Horticultural Society, for the opinion of the Society as to their applicability and usefulness.

"Their great recommendations are durability and ornament. They are composed of the same clay and are manufactured at the same works as the patent hollow bricks, and from what I have seen of them, they appear to become harder on exposure to the weather. Cheapness is another great qualification. They can be supplied in any quantity at 10s. 6d. per 100, or about 1½d. each, each tile being one foot in length.

"I would also call the attention of the Society to the mode by which they are secured in their position, although they allow the borders to be cultivated close to them, and any extent of the soil disturbed or removed. The shoe which passes under the walk being covered with four inches of gravel, when that becomes "bound" the tiles are literally immovable, and no wheelbarrow or roller can displace them. They also afford ample drainage for the walks, and under no pretence whatever do they over harbour slugs. I have had experience of them for nearly twelve months, and I have found them answer all the purposes an edging is intended to supply, and that too at more than one-half less than dwarf box, and nine-tenths less than many other edgings.

"*Note by the Vice-Secretary.*—This kind of edging appears to possess much merit. It is hard, good-looking, a good colour, cheap, and enables the walks to be relieved easily of water. The accompanying figure represents one of the main tiles seen in perspective. It is 4½ inches broad, 6½ inches deep, and 12½ inches long. In forming curves very short lengths of the same kind are employed."

The following is a list of the *Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers, sending us additions to the list, and giving the address of the Secretaries.

CORNWALL (PENZANCE), January 10th, and 11th. (Secs. Rev. W. W. Wingfield, Gulval Vicarage, and E. H. Rodd, Esq.)

DONCASTER, January 21st. (Sec. H. Moore, Esq.)

GREAT METROPOLITAN, January 11th, 12th, 13th, and 14th. (Sec. W. Houghton.)

HOMER, January 12th. (Sec. H. K. Venn.)

REIGATE, February 1st, and 2nd. (Sec. J. Richardson, Esq.)

TONQUAY, January 14th and 15th. (Secs. A. Paul, and J. CoStack.)

THE WINTER DESSERT.

Most of our readers are aware that many of our fruits, although excellent in summer, or even autumn, nevertheless, are not adapted for winter purposes, admitting that they can be procured at that period. Thus, the Queen Pine, which is everybody's favourite from May to October, is almost worthless in the dead of winter; and, indeed, the same may be said of the Providence, the Envie, and various others. To be sure, they are grown—to sell, somebody will say—yes, and to eat; but this does not prove them the most eligible. We are led to offer these remarks from observing in a contemporary paper (*The Gardener's Journal*) a list of fruit obtained from various quarters, showing, in a tolerably clear way, which are the most general favourites for late autumn and winter use; and as the subject seems quite appropos as to the season, we must beg to place it before our fruit-growing readers. One thing may be observed in the way of preface, that the majority of those who have given reports are men of no small repute in the gardening world; we, therefore, refer to their reports with pleasure and with confidence.

The subjects reported on are Pines, Grapes, Pears, Apples, Plums, Raspberries, Currants, Strawberries, Guavas, Medlars, the *Passiflora Edulis* and *Quadrangularis*, and the shell fruits. As many of the readers of this work may not be acquainted with the particular kinds, we will point to such as in our judgment deserve a marked attention.

In PINES the Queen kinds muster about eleven, whilst the Black Jamaica, almost always confounded with the Montserrat—perhaps the best winter Pine in England—counts seven. Next, we must point to the New Cayennes, which bid fair to become, not only popular, but useful: of these we have two of the smooth-leaved, and three of the prickly varieties. The other Pines we at once pass by, as not deserving, in the same degree, the character of winter Pines.

In GRAPES, eleven quote Hambros, seven have the Muscats, and seven the St. Peter's—"a dead heat." There are besides, our new Black Barbarossa, about which much fuss has been made, and we are glad to see not in vain, for Mr. Spencer, of Bowood, Wilts, no mean authority, parenthetically observes, "fine, and keep well." Besides these there are several varieties, but as they are not at present much in the market, and as our business is to point to well-known, profitable kinds, we must even pass them by, although some of their names are tempting.

In PEARS, the Winter Nelis, Glout Morceau, Duchesse d'Angoulême, Beurre Diel, command a majority; and in APPLES, our old favourite, the Ribston, is "head-and-shoulders" above all the rest. The King of Pippins seems a great favourite; and the Downton and Blenheim Pippins come in for a good share of patronage.

In the PLUM way we hear of nothing but the Coe's Golden Drop. How is this? where are the Coe's Late Red, and the Imperatrice section, that were so much spouted-up whilst new? Of course some late Currants are to be found, and Alpine Strawberries.

We must now beg to comment on these and other fruits adapted for use from the end of November until the end of January, when the question assumes a new phase; others must supply the gap; of which more on another occasion. We will commence with a crowned head—the Pine-apple. It is a great pity that the true Black Jamaica of the Horticultural Society should be constantly liable to be confounded with the Montserrat; but so it is. Even in this country, five out of six call the Jamaica the Montserrat. Now this should be put a stop to; it points at once to the propriety of referring to some one standard authority, and the great need for the committees of exhibitions so to plan their awards as

that all blundering of this kind be disqualified. It is silly enough, in these bookish days, to mispel names; but to give altogether a false name is decidedly unpardonable by the public. Whatever the Cayennes may prove, this has hitherto proved the best winter Pine in cultivation, and peculiarly adapted to the Hamiltonian mode of culture. However, we find that Messrs. Spencer, Tillery, and Turnbull, cultivate the prickly Cayenne, and Fleming and Spencer the smooth kind.

With respect to Grapes, we are glad to find the new black Barbarossa spoken highly of by Mr. Fleming, and grown also by Spencer. The Trebiana, grown by Mr. Tillery, is new to us. He calls it an excellent late white; we will write to him to beg information. The black Morocco used to be esteemed a good winter Grape, and we are surprised to find it so seldom grown. However, we shall do well to stick close to the West's St. Peter's, Muscat, and Hambros, for the present, for winter use.

We may now point to some excellent winter Pears and Apples; and first, the Pears. Marie Louise, as a November Pear, it is well-known cannot be excelled; we have them still in use, but they were retarded by mat-shading applied the moment they were anyways ripe. "Thompson's" is a capital November fruit, and so is *Rondante d'Automne*, though the latter is somewhat earlier, indeed, may be called an October fruit. Hacon's Incomparable good and hardy; Duchesse d'Angoulême, too, is both good and a great bearer, in use from the middle of October to the early part of November. Beurre Diel is a great bearer, and highly spoken of in the south, but it takes a second rank here (Cheshire) whether on a wall or table trellis. Napoleon we have tasted good at times; Passe Colmar excellent, and a great bearer, but must have a pretty good wall-aspect in the north; anywhere north of the Humber, a south aspect. The best of all the Pears is, doubtless, the Nelis d'Hiver, or Winter Nelis; we have never known it equalled; even the Marie Louise cannot reach this invaluable pear. It is, moreover, a great bearer, and may, by good management, be had in use from the middle of November until the beginning of January. This is a most singular pear in regard of habit. We could never imagine from what kinds it could have been raised, the foliage being so different from all other kinds. The wood is peculiarly slender, and the leaves almost lanceolate; more like some fine willow than a Pear. It is not unlikely that the old Crassunne is the parent on one side. We have grown very fair specimens this summer on an ordinary dwarf standard, as also on a little trellis; but the remarks applied to the Passe Colmar may be attached to this: it is better deserving a south wall than any Peach in cultivation, its utility is so great; and we here advise those about to commence its culture to graft it on a strong pear stock, for it seldom becomes luxuriant; and we should be inclined to doubt the Quince. Beurre bosc we can do nothing with in the north; a great bearer, and of immense size, but nobody will eat them whilst Marie Louise or a Nelis can be had.

One caution, however, is requisite here; in some seasons neither Marie Louise nor Nelis are to be had, and then these second-rate Pears become useful; for a middling fruit is better than none. It so happens that such Pears as Capiaumont, Beurre Bosc, Beurre Diel, &c., seldom or never miss a crop, they, therefore, may do to fall back on. We may here observe, that the Glout Morceau, although generally treated as a wall Pear, fruits here every year as an ordinary standard. We have also a Beurre d'Arenberg on a Quince stock, a tree fifteen feet high, and which in bulk covers little more ground than a huge Black Currant bush. This tree is in form an umbrella, and we gathered this autumn nearly six pecks from it; they are amongst our first-class

pears. About eighteen years since, being strongly impressed with the idea that Pears had generally failed on the Quince stock, through ignorance of their peculiar character as to soil, we made a station for this tree, imitating, as near as possible, the soils in which we had known the Quince to flourish—in fact, a rich alluvium. The experiment answered the expectation so fully, that out of some three score trees here, most of which succeed admirably, this is the most profitable; therefore the *Beurre d'Arenberg* and *Gloire d'Orléans* we may cordially recommend to our readers. *Easter Beurre* does not appear to have many patrons; we, however, find it a useful pear, and certainly a great bearer: we never knew it fail. Those who like the spicy flavour of the old *Swan's Egg* or *Muir's Egg* will relish this; it has, doubtless, been produced from these old pears on the one side. Why it should be named *Easter Beurre* it really is difficult to say, for we never could eat one after January: perhaps it is so called, in a negative sense, as not being good at Easter! To sum up in the Pear way, there is *Althorpe Crassane*, one of the most capricious things in existence: sometimes the most luscious Pear in the world; sometimes a mere turnip which has lain drying in some scullery for a few weeks. We have proved *Beurre Langlier* (livers), and *Doyenné d'Hiver* (livers), new pears; but we dare not recommend them at present. *Ne plus Mavis* is a tidy pear, a good bearer—not good enough for a first-class pear here, yet too good to throw away.

We must now call attention to APPLES; and first, everybody knows the *King of the Pippins*, or, as our "great unknown," who furnishes the Covent Garden reports, affirms to be in reality the "*Golden Winter Pearmain*." Now this is a useful Apple, but the *Williams' Pippin* of the Horticultural Society of London, one of the same class, is far superior, at least so we find it. This *Williams' Pippin* we advise every one of our friends to get; good bearer, good to eat, and a right healthy tree; as a great modern authority has said of a Grape, "one that does not know how to shank;" so say we of this apple: one that does not know how to fail. Well, there is *Hugh's Golden Pippin*, a good new apple; *Adams' Pearmain*; *Margille*, although liable to canker, is a rich apple; *Court of Wick*; *Blenheim Pippin*; and *Ingénue*, highly recommended, one of Mr. Knight's Golden Pippin seedlings, but never liked here.

There is one thing strikes us as extraordinary in the returns adverted to, and that is the leanness in regard of novelties. It would appear that superior fruit, like superior men, do not spring up every day. In these returns we see the following, which, a very few years back, were said to be valuable accessories to the modern dessert:—*Adams' Pearmain*, good, certainly; but only one advocate, Mr. Tillery; *Court Pendu plat*, too, one patron, Mr. McEwen; again, *Maclean's Favourite*, backed by Mr. Henderson alone. *Cornish Gilliflower* has Mr. Dawson for a friend. *Wyken Pippin*, a name which has figured in every list for the last seven years, has the name of Henderson alone appended to it. There are, indeed, several others which are of recent origin, and which have not yet made their way, although backed by high authorities.

R. ERRINGTON.

BULBS.

(Continued from page 242).

BRUNSVIGIA (BUPHANE) CHILIARIS.—This, with *diptycha* and *toxicaria*, forms a distinct section of *Brunsvigia*, and they are much more difficult to flower, and to keep in good health than *B. Josephine*, *B. grandiflora*, and *B. multiflora*, the true *Candelabra* plants of the Cape. This species was found growing in strong clay, along

with species of *Mesembryanthemum*, and a strong yellow rough loam with a little sand suits it best in a pot. Good drainage and small deep pots, in proportion to the bulbs, with the soil pressed close together and to the bulbs, are all necessary points for this plant in particular. The pots called upright 24's, or upright 18's, must be used for most of the imported bulbs of this and of *B. diptycha*. If this bulb is received from the Cape in the summer, or at any time after the end of February, without any signs of growth in it, the grand secret is not to pot it until the end of the following August. In the mean time it should lie in the sun, with free air, and be kept as dry as possible, and be turned round and round, and every time the white bugs looked for and destroyed, which come over in myriads with all large bulbs from the Cape. If the bulbs stand half-an-inch from the pot at the widest part it is enough; and after once any of these large bulbs make healthy roots and leaves, they should never be disturbed again until they break the pot, with extended growth. After potting, give one good watering from below by means of a saucer, and the moment you see the surface of the soil turning damp remove the saucer, and that watering should last all through September. Early in October the bulb ought to be in leaf; but if it should not come into leaf till Christmas, no heat should be applied, nor any kind of forcing, and from the moment the leaf can be seen, the bulb should have as much air as if it was out of doors; and if actual frost is kept from it no cold will affect it during the winter, and very little water will do for it till the middle of February. Then increase the watering by degrees, and if a sunny month, the bulbs may have water every other day until near the end of April, and by the end of May it should be at rest, and receive a dry and hot rest till the end of August or middle of September, when the flower scape ought to give the first indications of life and motion. The flowers are pinkish, and come in large heads like those of *Agapanthus*; and a strong bulb in Africa will have as many as 280 flowers in one head.

BRUNSVIGIA (AMOECHARIS) CORANICA. This large bulb must be kept quite dry from October to the end of March; then to be potted in the same kind of soil and in the same way as the last. The natural heat of that season is quite enough, for it is in a greenhouse or cold pit until about Midsummer. An old-established bulb might stand constantly in a saucer of water from the middle of May, but to have no more water than would just cover the bottom of the pot. When the leaves are full grown in June the pot should be plunged to the rim in a brisk bottom-heat of 85°, and a strong current of air allowed day and night. Without this it does not throw up the flower scape; when this appears, and is four or five inches high, bottom-heat should cease, and the constant moisture at the bottom be renewed until the flowers begin to open in the greenhouse. After that give no more water than will keep the leaves fresh until they begin to change colour. If the bulb should not flower, keep it in the bottom-heat until the leaves die down.

BRUNSVIGIA (BUPHANE) DIPTYCHA.—This is one of the largest of all the Cape bulbs, and is readily known by its dark skin. It is a darker looking bulb than any from the Cape; but it seldom comes in those boxes the traders make up for speculation, probably because it grows beyond the range of their gathering. It requires exactly the same treatment as *Chiliaris*.

BRUNSVIGIA (AMOECHARIS) FALCATA.—It does not matter whether we take this or *Coranica* as the species, the other is only a little variation from it. If a very old bulb of one of them were to flower at the same time with a very young bulb of the other, one might find a slight difference in the shades of the flower, but that is all. The misfortune of these bulbs is, that their culti-

vation was so little understood at first that few could flower them; so that one botanist seldom had an opportunity of examining more than one or two species; and each succeeding botanist had a different notion about the points that distinguish one species from another, and the result is, that not the slightest reliance can be placed on all that has been written botanically on *Amaryllids* from the days of Linnaeus.

BRUNSVIGIA GRANDIFLOKA.—This is the next largest bulb, and a true *Brunsvigia*, flowering before the leaf in September or October, after resting all the summer, and growing with us during the winter and spring like a *Hyacinth*. The same treatment we give to our best *Hyacinths* will just suit it. If it were shut up close in a cold-frame for ten days, before the end of January, it would not recover itself that season: it is much more impatient of want of air than *Josephine*. I had a native specimen of the flowers of this bulb gathered within tide-mark, or, at least, very near the sea, in Table Bay; and the naval officer who gathered it was confident that the roots must have been often in salt water. There were forty-two flowers in the umbel, and each flower, stalk was a foot long, and probably more before drying. There is not much difference in the flowers of this and of *Josephine*. They are a dull-red colour chiefly; and after all the talk we make about them, they are not very showy or gay, but only curious. *Multiflora* is of a much brighter colour, and that of *Amocuris falcata* is greyer than either of them.

BRUNSVIGIA JOSEPHINE.—This is the easiest to flower of them all, and the easiest to keep. A smart frost has no effect on the leaves. I had common pot *Geraniums* killed, roots and all, within a foot of it in a border, without any bad effects either on its broad, recumbent leaves, or on the neck of the bulb, which was up to the surface. There are two or three varieties of it, unless they arise from the difference in the age of the bulbs. One of them is certainly more streaked with minute dark lines in the flower. Any attempt at forcing this bulb deranges it for twelve months. The pot cannot be too small for it, if the bulb can be got inside of it, and a good depth for the roots; the bulb is just as safe if only one-third in the ground; and it never wants a change till it splits the pot, like a strong *Crinum*. I have seen it with only fifteen flowers on a scape, but generally there are from twenty to thirty, and they spread out candelabra-fashion, quite as much as those of *B. grandiflora*.

BRUNSVIGIA LUCIDA.—This name must be expunged from the genus, the plant it is applied to being a true *Nerine*. It was by a mistake in Dr. Herbert's Appendix that it got into this genus. He, however, made the correction in his *Amaryllidaceae*. It suffices here, therefore, to say, that it must be kept growing all the winter in a low temperature, and with abundance of air. Strong, friable, yellow loam suits all this race.

BRUNSVIGIA MARGINATA.—This bulb is totally lost to us. It was found by Masson on the west coast on this side of the Cape, and is figured by Jacquin; but as it is supposed to be the only link by which *Amaryllis* can be united to *Nerine*, through *Brunsvigia*, I shall describe it, in the hope that some one journeying from Cape Town to the Orange River may fall in with it. Any one the least acquainted with plants may know it. The leaves are about three inches wide, and four long, when the flower scape appears; and there is a red tinge all round the edges of the leaves, which no other African bulb represents. On squeezing the leaf between the fingers it has a disagreeable smell. The flowers are a little waxy, and not quite scarlet. Any one who could get this bulb and carry it to Sidney, would open a sluice which would drown one-half of our bulb-botanists, and would very nearly place the beautiful *Amaryllis* on the same footing which Linnaeus gave it.

BRUNSVIGIA MINOR is only a dwarf variety of *Josephine*, if even that.

BRUNSVIGIA MULTIFLORA.—A true *Brunsvigia*, and the best of them, but was mismanaged for more than twenty years, through Mr. Sweet saying that it was a stove plant, in the first number of "The Gardener's Magazine." He said it was like *Hemanthus multiflorus*, but they were then (1826) in such confusion that we hardly knew which he meant. But these *multifloras*, however, will live out-of-doors with a very slight protection, and Sweet never could have written that from his own practice, for heat soon spoils them. It requires exactly the same treatment as *B. Josephine*, *B. grandiflora*, *B. villaris*, and is the best of them for crossing with *Belladonna* on one side, or with *Valotta* and *Nerine venusta* on the other. A triple cross from the three last would make the finest genus of all that we know of in *Amaryllids*; but we want the connecting link (*B. marginata*) before *Nerine* will breed with any of them.

BRUNSVIGIA RAPULA.—A small bulb, also from the west coast on this side the Cape, of which we know nothing beyond Jacquin's figure. Like *B. marginata*, it comes near to *Nerine*. Thus it would seem that the intermediate link which is wanting to connect *Amaryllis* to *Nerine* inhabits a zone on the north-west limits of the genus in Africa, where no botanical collector visited since Masson.

BRUNSVIGIA STRIATA.—This is either a variety of *B. multiflora*, with the flowers more streaked, or a nonentity.

BRUNSVIGIA (BUPHANE) TOXICARIA.—This, like all *Buphanes*, has the flowers much crowded in the head. They are smaller and more erect than in the true *Brunsvigia*, but the same kind of culture and soil will suit them. A strong, friable, yellow loam, pressed hard, and with good drainage, is best. One accustomed to Cape bulbs could pick out *B. toxicaria* at first sight, from the light brown colour, and the long shape of the bulb. An upright hyacinth-pot is sufficiently long for a full-grown bulb of it. The least touch, or cut, to any part of the living substance will cause it to bleed a thick creamy substance, which is said to be poisonous, and which, I know, will stain linen badly.

The best of all these is *Brunsvigia multiflora* and *Amocuris falcata*, and then *B. grandiflora*, and the fourth, *B. Josephine*; and except it be for experiments, these four are all that are worth growing of the very large Cape bulbs. *B. citiaria*, if well grown, would look well, or rather interesting, from the great quantity of flowers in one head. None of them are worth crossing in England, except to prove how far the limits of *Amaryllis* extend, because seedling bulbs of them take half a lifetime to flower; but in Australia, New Zealand, the south of China, Natal, or Valparaiso, and such places of similar climate, they are, of all other bulbs, the most promising.

Under *Cyrtanthus*, which is another section of *Amaryllis*, I shall point out the cause why crosses in many of these sections have failed in Australia. After getting through all the bulbs, I shall point out classes of them which will do to grow together in different ways. Meantime, two corrections have reached me already, for which I am very thankful. I said that none of the *Collanias* were introduced; they are *Alstromeria*-looking plants, with a growth exactly like the common *Fritillarias* of our own meadows, an upright rigid stalk, the top of which bends over, from which it clusters of flowers hangs down. *Collania dubia*, flowered at Spofforth, and was figured in "The Botanical Register" in 1842. I said that the error about *peregrina* was continued by every one save Dr. Herbert; and am told that Dr. Lindley writes *peregrina* since the mistake was discovered. I am too old now to take offence at anything in this way, and would wish to be criticised severely in

all I advance on these bulbs, to see how far we can make THE COTTAGE GARDENER a standard authority for them; any facts, however trifling they may appear to others, will assist me materially.

D. BEATON.

HARD-WOODED GREENHOUSE PLANTS.

WESTRINGIA DAMPieri.—The chapter to-day will be chiefly devoted to the inquiries of correspondents. Both the generic and specific name of the above plant are commemorative. We are indebted to New Holland and New South Wales for the group. The present species is a low evergreen shrub, producing small whitish Rosemary-like flowers in autumn and the beginning of winter. It is easily propagated by short stubby cuttings, inserted in sand, under a bell-glass, in a shady frame in April, or even, in similar circumstances, under a hand-light in a shady border in June. Sandy fibry loam, enriched with a little rotten leaf mould, or very decomposed, dried cow-dung, will grow it admirably. It will want a good supply of water in summer, and, of course, less in winter. Little pruning will be requisite, unless what is wanted to keep the plant in shape, and the required size, and that had best be effected in spring. A suitable position for the plant would be an open place out-of-doors from the middle of May to the middle of October, and a cool place in a comfortable greenhouse in winter.

Though, to meet inquiries, I have stated the above, I must add, that where either show or great interest are objects, and the room not very great, I should never think of recommending the above to an amateur's notice. There is nothing very striking in the whole genus, but the most so are those with bluish flowers, such as *Rubicefolia*, *triphylla*, and the older *rosmarinifolia*.

The last, and most of the rest, will stand a sharpish frost, if kept dry in winter at the base of, and trained against a wall. I had noticed this genus, and the allied one of *Prostanthera*, as being well worthy of a trial against a conservative wall. I recollect, many years ago, seeing *P. lasiantha* against the wall in Chiswick Gardens. From some hints, it would be seen, I intended saying my say on this interesting subject, but my friend, Mr. Appleby, has first got possession of the field, and it could not be in better hands. I think, however, to avoid confusion, and to prevent mistakes in these progressing days, a few new names and terms will have to be given and defined. A conservative wall, in its original meaning, was merely a common wall, furnished with a coping, capable of being widened in winter, so as to throw off wet, and prevent the radiation of heat; and against this plants were tried as to their comparative hardiness; or, it was ultimately covered with creepers, twiners, and such plants as would bear to be grown with one side, without impairing their beauty. The next idea was to have for such a wall a short sloping or hipped roof, with upright glass in front, enclosing a space of some six feet in width, so as to admit of a path inside; thus permitting of the enjoyment and the examination of the plants in all weathers. Now, though air could be admitted to such a wall at pleasure, and though keen frost would find its way easily through the glass in winter, if neither double glass nor other covering were resorted to, yet, as even then, from the closeness of the sashes, the atmosphere within would be still, and consequently the stems of the plants would neither be so ruptured nor robbed of their juices as in a frosty wind, on a conservative wall, the same term should not be used, but a new one should be coined, such as "*glass-based wall*." Again, the term conservative is still more inappropriate when applied to such narrow structures when heated. What is there to distinguish them but their narrowness, from any common conserva-

tory? What plant is there that will flourish in a greenhouse or conservatory, that will not also succeed in such a narrow house? The one at Chatsworth is a noble structure, and it will be still more grand when extended to the north, so as to join the mansion. But such a structure, when heated, would be more properly called a "*conservatory wall*," instead of a conservative one. In fact, such a wall might be a plant-stove wall, or a peach-house wall, or a vinery wall, a ripening wall, or a forcing wall, according to the purpose for which it is employed. Mr. Fleming has put up great lengths of such structures at Trentham, marked alike by simplicity, economy, and efficiency, for a destined object. He finds that he can have a trellis nearly half-way up the front without shading the back wall. In some of these structures he intends, by sun-heat alone, to accelerate and mature; while in others, he intends to force and obtain early fruit. Now, these facts will show there is a necessity for a new class of terms. Besides, it is necessary to notice, that these heated "*conservatory walls*" will be very apt to lose in attractive power when their novelty is gone, just because, except in the case of twiners, creepers, and one-sided plants, there will be the want of the "*natural*" as respects other plants placed against it. A plant that grows as a bush, or a low tree, may be cultivated against a wall, and look beautiful too; but then the looker-on can form no idea of its natural habit. Had I the chance of enclosing such a wall, I would prefer a width of ten or twelve feet to the half of that space; and then, in addition to the clothing of the back wall, I could have nice bushy specimens in the border in front. "Well, but that would just be a conservatory." Just so; and a heated glass-enclosed conservative wall is nothing else. The wider house would merely require more space, more glass for the roof, and more heating power, than the smaller one; the latter nearly, but not quite, in proportion to the greater surface of glass on the roof, as the greater body of enclosed air would prevent the place being so suddenly cooled. I have alluded to the matter in passing, and I think that some definite terms are not unworthy the consideration of Mr. Appleby, and other coadjutors.

EUTAXIA MYRTIFOLIA.—This beautiful New Holland shrub blooms in the autumn, winter, and spring months. Its small orange flowers are produced in great abundance along the young shoots. The following will be found a concise and yet full outline of the treatment it requires in pots.

Propagation.—Choose short, stubby shoots, getting firm at their base, in April or May; cut clean across at a bud, and insert in silver sand, over an inch of sandy peat, the lower part of the pot being filled with drainage. When watered, place a bell-glass over them, and set them in a frame, or pit, where they can be kept close, but without artificial heat. They will soon strike, and then should be potted off in sandy peat, and placed again in a similar place, preventing flagging by shading, and dustings from the syringe. When taken with the pots, stop the growth, by nipping off the points of the shoots, to make them bushy.

Selecting Plants.—Choose a low-growing bushy fellow, although it should not be the fourth of the size of a leggy one.

Soil.—For the first few shifts, when the plants are small, use chiefly sandy peat, and a little broken pots and rubby charcoal. By the time you get them into four-inch pots use a little sweet fibry loam, and let the loam be in equal proportions to the peat when the plant will fill a six or eight-inch pot, using even then abundant clean drainage, and charcoal, broken pots, and silver sand, to keep the soil open, packing it firmly about the roots.

Watering.—This will be required liberally in summer, less in autumn, and a fair portion in winter, especially

if in bloom. Syringings over-head in spring and summer will be of great importance, and tend to keep red spider and scale at a distance.

Pruning.—This plant, when young, requires frequent stopping; when grown to a flowering state it should be pruned back when the blooming period is over. The greater number of equal-sized young shoots made in summer, and the better they are matured in autumn, the more abundantly will you be supplied with bloom.

Position and Temperature.—When pruned, the plant should be placed in a pot where it can be kept close and warm, or the same advantages given it in the greenhouse. Little water should be given at the roots until fresh shoots have broken, but the stems and the atmosphere must be kept moist by the syringe. As the shoots increase in length, more air must be given, gradually at first, until the tops of the plant are fully exposed in August and September. It will be advisable to house, or shelter, in October; and in winter, if coming into bloom, the temperature at night should not be below 45°. If not in bloom, 5° less will suit it better than a dry heat from fires. In fine, sunny forenoons in winter a dash from the syringe will do it good. In the south of the island this plant has been found to stand against a conservative wall; north of London I have little doubt but it would answer against a glass-cased one, more especially if it was so managed as to flower about the months of April or October. There are other two species—*N. punyana*, very similar in habit, having likewise small orange pea-blossoms, sometimes called *Dillwynia punyana* and *Baxterii*, having yellow flowers, and more robust in habit. These latter may be treated in a similar manner, but they almost constantly produce their blossoms in early spring and summer.

EUCHILIS ONCORDATUS.—This is another pea-blossomed plant, with small yellow-flowers, produced chiefly towards the points of short young shoots. The yellow in the bloom is contrasted with a purple keel. The principal characteristic in the plant is its blunt, curious, reversed heart-shaped leaves, and its upright mode of growth. In the main points of culture, that recommended for *Eutaxia* may be followed. I will merely notice the difference in some little points. It blooms chiefly in early summer. The cuttings may consist of the points of shoots, if side shoots cannot be got; and after being inserted, in May or June, for a few weeks, they will be benefited by a little bottom-heat. I have never heard of it doing much good, unless as a greenhouse pot-plant. It requires even then considerable attention. The soil should be three parts peat and one loam, well drained, and well opened with pieces of broken brick and charcoal, and a fair portion of silver sand. Stagnant moisture is its ruin. It should not be dashed with heavy rains even in summer. A pit is, therefore, a better place for it than a position in the open air. The night temperature in winter should not be much below 45°. Great care must be taken then not to sour or sodden the soil. In dull weather it will seldom want a visit from the water-pail. Pruning should take place when the flowering is over; but unless it be required to keep the plant small, the pruning should not be severe. It is more safe to grow on a young plant than to lop an old one.

R. FISH.

THE AURICULA.

This most elegant and highly-esteemed spring flower has not progressed so much as most other florists' flowers, either in improved varieties, or in public favour; that is, the number of growers have not increased. The public, indeed, admire the flowers as much, or more, than ever, when they see them exhibited; but there is not that eagerness about cultivating the Auricula as there is about Pelargoniums, Cinerarias, Carnations, and some

other flowers: and why is this? Confessedly the Auricula is behind none in beauty of form, elegance of colour, and neatness of habit, besides being sweetly perfumed. The causes, no doubt, are a kind of fear that they are difficult to grow, slow to increase, easily lost, and rather high in price, especially the very best kinds. Now all these reasons are, I think, unfounded, or, at least, not more applicable to this deservedly-favourite flower than to many other florists' flowers. Carnations, Picotees, Pansies, Ranunculuses, and Tulips, are equally difficult to keep, some of them as slow to increase, and the best quite as high in price. I consider it rather a stigma upon amateur florists that they neglect this spring-blooming, beautiful flower. It is true, though it is a native of the Alps of Europe, it will not bear our cold, foggy, changeable, damp winters, for it requires the steady, dry Alpine atmosphere of its native dwelling; but our persevering florists overcome greater difficulties in culture than this of managing the Auricula, so as to imitate the dry, pure air, and covering of snow, in the Alpine regions. I have been requested, by a new correspondent, to give a list of the best Auriculas, with a few brief hints on their culture, and this request has drawn from me the above preliminary remarks, and I trust many of the readers of THE COTTAGE GARDENER will find the following useful; and some that have not hitherto turned their attention to this charming flower, may be induced to try to cultivate, at first, a small collection; and by way of encouraging such to make the attempt, I assure them they may procure four-and-twenty very good old kinds for 30s.—no very heart-breaking outlay. The only other article that is expensive is a two-light box to grow them in through the winter and through the blooming-season in spring; and this two-light frame, after that season is over, may be used either for cucumbers, or for propagating various kinds of flowers. The glass is cheap, and wood is not very dear, so that this frame will not be excessively expensive, and a new beginner, for a very few pounds, may make a fair start in Auricula culture; and if success attends his efforts, I will venture to prophecy he will be perfectly satisfied with his small outlay—small in comparison to beginning to cultivate a decent bed of Carnations or Tulips.

To make my instructions easy to remember and understand, I will divide Auricula culture into, 1st, Soil; 2nd, Summer treatment; 3rd, Winter treatment; 4th, Propagation; 5th, Properties of a good Auricula; and lastly, a list of the best in their various classes.

1st. *Soil*, or rather compost. Simple soils, such as heavy loam, light loam, bog, or peat, would not grow the Auricula to that perfection which is required in order to produce strong blooms finely formed and highly coloured. This every florist of any experience is aware of, and, therefore, he combines three or more kinds, and this mixture is properly enough called a *compost*. For the Auricula, I am no advocate for a rich, stimulating compost, yet I am quite sure it requires one, in a certain degree, enriched with something that may be described as mildly encouraging, in order to produce strong growth, and, consequently, fine bloom. Such stimulating manures as night-soil, blood, sugar-baker's scum, fowl's dung, &c., that some writers recommend, require, in order to temper their highly-stimulating powers, so long a time exposing to the air, with frequent turnings, that when it is safe to use them, the greater part of their enriching powers or qualities have evaporated, and the residue is not much better than common earth, so that all this long preparation is time and expense thrown away. The compost I have used with the greatest success is much more simple, more easily procured, and is sooner ready to use. It consists of loam procured from an upland pasture, or, in some districts, from a pasture near to the banks of a river; of this, the

top spit, not more than four or five inches thick, is the best. This should be carted home, laid up in a long, rounded heap, and turned over (chopping the turf into pieces) three or four times during a year. In that time it will be fit for use. This kind of loam may generally be procured from some nurseryman mellowed down ready, if the amateur cannot procure it, or wait till it is prepared. The next article is some well-decomposed manure, such, for instance, as hotbed-manure a year old. Then a portion of vegetable mould, made from decayed leaves of trees, and, lastly, some sand, either that called silver, or some from a river-bed finely sifted. The proportions are—four-parts loam, one-part manure, one-part leaf mould, and about one-tenth part of sand. The whole to be thoroughly mixed at the time of using, without sifting, excepting the river sand. While the mixing is going on, any stones, roots of weeds, wire-worms, &c., should be carefully picked out and thrown away. Use the compost in a state neither wet nor dry. This compost, used in a proper state, and of a right age, will grow Auriculas strong, and bloom them satisfactorily, all the other points of culture duly and properly attended to. These points must be the subject of my next paper.

T. APPLEY.

(To be continued.)

CONSERVATIVE WALLS.

(Continued from page 225.)

TRUSTING my former remarks on these walls have at least set our readers thinking on the subject—and, let me hope, some few will not only think but actually try the experiment of erecting one and putting it to the uses I have hinted at—I now proceed to answer the question—Should this wall be heated? and this query involves the very natural one—By what means?

In our uncertain climate we have some winters that are so mild that numbers of half-hardy plants pass through that season with very little injury; against a wall, even without heat; but then, every seven or ten years, we have one of our old-fashioned winters, such as that never-to-be-forgotten one of 1837-8, in which the thermometer sinks down to zero! and then the constitution of our plants is tried to the utmost. I need not remind our readers, that in that season the common Laurels, the Laurustinus, Sweet Bays, and many others so-called hardy shrubs or trees, were cut down to the earth, and in some cases completely killed. Now, as no one can foretell, or be certain, that such another season will not happen again, I answer the query by saying, emphatically,—most certainly, Yes. Let this conservative wall be provided with the means to be heated. If the season proves mild there will be no necessity to light the fire; but should it be severe, or if there is any likelihood of its being so on any night, or successive nights and days, then the gardener is provided against its injurious effects, and will feel perfectly secure and easy in his mind, that he has the power to preserve his cherished plants, let what weather will come. The owner, too, will feel glad, in the event of a severe frost, that he has been induced to heat his walls, and by that means preserved his rare and beautiful plants that have, perhaps, for years delighted himself and his friends with their beauty and aromatic perfumes.

The walls, then, whether for fruit or plants, having been determined to be built, and, furthermore, to be heated, the query next to be answered is, By what means? It has been mentioned that the walls at Osniaston Manor (see page 183) are heated by hot-water pipes, and that, I can aver from ocular demonstration, most effectually; and, inasmuch as those walls heated with hot-water answer admirably, it follows that the

best means of heating a conservative or any other kind of garden wall, not even excepting glass ones, is by hot-water pipes. These points being settled, the next query in rotation is—Should it be covered with glass? The answer to this query requires some consideration. Though glass is much cheaper than it used to be, still, to cover a wall, perhaps a hundred feet long, the cost will be, as a Yankee would say, "tarnation considerable;" and besides, the mode of doing it might be still more expensive. As it is, a wall for ornamental purposes, the covering of glass, to be in character, should be ornamental also. It would not be at all advisable to put up the glass cover in the rough manner of Mr. River's orchard house merely for the sake of economy, for, in other words, for the saving of a few pounds to cover it at the least possible expense. No, if it is determined to clothe it with glass, let it be done handsomely, something in the style of the often-referred-to one at Chatsworth, which is a handsome object, independently of the fine specimens of rare plants it contains. The principal considerations in favour of covering this wall with glass is the more certain protection to the plants, and the comfort of walking under it in wet or stormy weather. It might then be connected with the sitting rooms of the house, and would be a most agreeable promenade in all kinds of weather. All this I must leave to the consideration of the owner. The covering with glass is not absolutely necessary, but it is absolutely advisable to determine, previously to commencing building, all these particulars. 1st. Whether to build it at all. 2ndly. If it is to be built, to have the wall hollow. 3rdly. To heat it with a boiler and hot-water pipes; (those pipes should be placed near the bottom, inside the wall, and the inside should be contrived so that the heat will have access quite to the top; the pipes are placed near the bottom for the convenience of circulation, the heat being sure to rise, from the well-known fact that heat always rises, provided no solid body interrupts it.) 4thly. To cover it with glass carried out so far from the wall that there will be space for a walk at such a distance from the plants that they can be easily seen and examined. Supposing it is determined to make a thorough good job of it, and do it well, handsomely, and effectually, so as to answer the purpose and be a comfort and pleasant recreation, then procure an estimate from a respectable builder, with proper specifications, and let it be put up during the spring and summer months, in time to be planted before the cold weather commences.

T. APPLEY.

(To be continued.)

THE CLOSE OF THE YEAR.

HAVING arrived at the close of a year, the autumn of which has been one of extraordinary wetness, a great deal of out-door work has, in many instances, been delayed; and we fear that much that has been done, has been accomplished under circumstances which very much impair its utility. The heavy and almost continuous rain has so soddened the ground, that all operations must have so consolidated it, as to render it almost impervious to the influence of the atmosphere. Now, bad as this is, I am far from thinking that a piece of ground, hardened by being trod upon, or otherwise pressed down, is the worst condition that it can be in at this untoward season, as it must be apparent, the more solid it becomes, the less water it is likely to hold, as is easily seen by turning up a spade-ful. Now, though at certain times rain water imparts a fertility to soils (apart from the refreshing effects it has on the plants growing there), still, when administered in too great a quantity, its utility is like that of

many other valuable things, hurtful when given in excess.

The continuous rains wash out of the ground those soluble matters which it is most in want of; the essence of dung, and other enriching manures, being so frequently soaked in water, necessarily part with their juices, which, being carried below the reach of vegetation, are lost to the ground. This being so often repeated, has left the ground that abounded in rich animal or vegetable manures robbed very extensively of some of its most important component parts, without the soil deriving any commensurate advantage in return. Now, it is easy to perceive, that grounds throwing off the rain, or allowing it rapidly to subside, are less likely to be injured by the extraordinary fall of rain than those retentive and tenacious soils which, having once become saturated, are very tardy in parting with it; on such soils, it is not too much to say, that if they cannot be relieved by judicious draining, that a hard-pressed surface, in a wet autumn, is better than a loose, fresh-dug one; the latter only allowing the soil to hold more water, without that water being enticed away by any of those means which draining is especially provided for; while its remaining so long unchanged in contact with soil not requiring it, a sourness arises, which requires some considerable exposure to the atmosphere, &c., to remove. This state of things is much aggravated when any one is so indiscreet as to dig or till ground at the time it is so saturated. It is then compressed mechanically into a condition more resembling mortar than anything else; in this state, a long period of favourable weather and treatment is necessary to bring it round again, and it does not always happen that this description of weather follows after a wet season. The long-continued drying winds of last spring were very beneficial that way; but who amongst the many that have undertaken to prophecy the forthcoming season, have said anything but "serious forebodings of severe frosts and snows," following each other with that destructive tendency which made the season of 1837-38 so memorable in a horticultural point of view. That the weather of the next two months is destined to be like that veritable season, is not my purpose here to prognosticate, but that it may exceed the severities of the last three winters is very probable, while vegetation is certainly not in the most hardy condition to resist it.

The setting-in of the wet season before the growth of many deciduous trees and shrubs had been brought to a close retarded, and at last only imperfectly ripened them; tender and late-growing evergreens were in the same condition; while herbaceous growth has been stopped by incessant wet, rather than cold; the number of frosty mornings having been few and unimportant; while drying winds have been less plentiful; so that, taking altogether, we may conclude that many things are in a bad condition to withstand the rigours of a winter of more than ordinary severity. It therefore becomes the careful cultivator's duty to see what protection can be given them, or rather what can be done to enable them to stand frost and snow with less harm to themselves. *Brocoli* that are fit to cut suffer much if exposed to frost; it is better, therefore, to take up all such, and hang them up in some cool place away from drying winds or withering fires; observe, they must not be much stripped of their leaves, and the stem must be left pretty long as well. The hardier kinds, which it is not prudent to lift, may be partly laid down, which is done thus: beginning at the west side of a piece of *Brocoli*, dig a small spit out close to the stem of each plant; then bend them down all that way which is pointing west, the earth from the bottom of the next row of plants may be laid over the last, and the second one bended over the same as the first, and so on

until the whole be done, when they will present a mass of plants, all lying on their sides, and pointing westwards. This direction I think is best, and likewise better than lifting them entirely and removing them to another place, because the loss the roots sustain by the practice here recommended is not so much as when the whole plant is taken up; in fact, beyond the fractures of a few fibres, on the side it is bent from, the injury that way is unimportant. The prostrate position presents a greater number of folds of leaves, as covering to the heart than is shown by the ordinary upright position, while the attempts of the plant to regain that posture is equally useful in producing a more effective covering to its central, or more tender part of it. *Endive*, that has been partly blancheted, may be taken up with balls and carried into some dry cool shed, and there placed with its roots in sand. A sufficient stock of all *Roots*, which remain in the ground during winter might be taken up and similarly treated; this includes *Celery*, *Horseradish*, *Jerusalem Artichokes*, *Parsnips*, *Turnips*, and, in fact, all other roots which are left in the ground in ordinary seasons; a few of each for present consumption may, as I have said, be housed as above, care being taken to prevent their withering. Protection must also be given to *Pears* that were sown in November, which the absence of cold weather has brought forward to a greater degree than usual. We have found barley-chaff laid along the rows, and secured there by drawing a little earth to it, better than anything else that we have tried; coal-ashes are also good that way. *Beans* may be treated the same, while *Spinach* can only be protected by a covering of mats or other matter of that kind; thatched hurdles are very good, too, and for crops growing in beds as this and *Lettuce*, they act very well by leaning against each other in the centre, forming a "span-roof" of no mean capacity. By this kind of shelter, large and forward *Lettuce* plants may be saved, while the younger ones, being hardier, stand the winter without such covering. It is almost useless to talk of covering-up frames, &c., because this is so universal a job as to be known to every one. The *pumps*, *water pipes*, and other contrivances for supplying that necessary article must also be duly protected, if not already seen to, and all other means adopted that can render things more secure, such as the well-covering-up of *potato-heaps* and other stores; and, in fact, all those *et ceteras* which alone constitute good management must be seen after before that severe weather sets in which weather-prophets tell us is in store for us still.

J. ROBSON.

ACCOUNT OF A PROVINCIAL HORTICULTURAL MEETING IN SCOTLAND.

In comparing the present with the past state of horticulture throughout different districts of Great Britain, one is forcibly struck with the advances which have been made within only a brief period of time; and there can be little doubt that much of the progress is imputable to the exertions of Horticultural Societies. By means of these useful institutions, a spirit of emulation has been evoked in localities remote from the general intercourse of the world, and among classes to whom a love of plants was hitherto an unknown pleasure. No small amount of ordinary procedure in society may be said to be a result of fashion, more than of deliberate principle; and taking advantage of this conspicuous tendency, horticultural societies have, wherever established, created a certain fashion in the taste for plant-culture, and thereby fixed and given currency to feelings that might otherwise have languished, and been of no practical avail. The fashion being led by parties for whose opinions and habits there is considerable respect, others in their various degrees have followed, till at length the most humble and least excitable have been stirred into activity. Having attained this desirable point, it is astonishing how

the newly-created flower-culturer expands in his notions, and becomes possessed with a love of plants. He, as it were, has come into a new life. The face of nature, it may be, once blank in his eyes, is now clothed in beauty; and existence has charms which were not formerly dreamed of.

It is obvious that this love of plants has two important consequences. In the first place, it need not be insisted on that gardening—the treatment of plants according to the enlightened rules of science and art—is of the highest economic value, and that by all proper means it could be carried to its utmost limits. But, independently of this practical view of the subject, there is something in gardening, even on the humblest scale, that commends itself to our favour. And here we would draw an illustration from a contemporary periodical. "It has been very properly observed," says a writer in *Chambers's Journal*, "that a love of gardening, on however small a scale—be it only the tending of a pet flower-pot—has in it something that exhilarates and improves. One seldom hears of gardeners misconducting themselves; and we venture to go a step further, and say, that no person whatever, who once imbibes a taste for pansies and hollyhocks, and thinks much of cultivating dahlias and anemones, is likely to be an indifferent member of society. It would not be difficult, to demonstrate, that the promotion of a taste for flowers and plants generally, leads to an elevation of taste in other things; and it is remarkable how little is required to excite a love of horticultural pursuits, even in situations supposed to deaden the higher class of emotions. A story is told of a whole village in the Highlands being stimulated to enter on a course of improvement, from the simple circumstance of a lady one day expressing her admiration of a single marigold which grew in the neglected garden of one of the cottagers. 'In it possible,' thought the proprietor of this little flower, 'that anything I have in my poor garden is worthy of the approval of a lady? If so, I will endeavour to make things better—I will try my hand at a few more flowers.' Thus reasoning, the cottager began to occupy himself in his garden; neighbours followed his example; a spirit of rivalry was begun; and, lo! in a short time the whole village, interior and exterior, assumed quite an improved aspect—cleanly doorways, walls decorated with flowers, and a general advance in all matters of taste. Now, this anecdote, which rests on good authority, affords a pretty fair specimen of what may be done by a little judiciously-administered approbation, acting upon a spirit of honourable competition."

So much may be said in the way of general observation. Our more special object in the present article is, to describe the rise and progress of a Horticultural Society in one of the rural districts of Scotland; and at the same time, to offer such hints on the method of getting up institutions of this kind, as may prove useful to those who are desirous of establishing them. A short account of the society in question, appeared in the journal above quoted; and a more extended notice for practical purposes being, to all appearance, called for, we trust that that which is now to be submitted, will realise all reasonable wishes on the subject.

The institution to which we allude, is named the Peeblesshire Horticultural Society. It was established in 1850, and consists of a body of individuals of three different classes—professional gardeners, amateurs, and cottagers; each member of the two former classes pays a fee of 2s. 6d. per annum; and cottagers, whose yearly rent does not exceed £5, pay a fee of 1s. per annum. The members appoint, from their own body, a president, vice-president, treasurer, and secretary. These officials are, of course, honorary; the secretary, though having, no little correspondence, and general management to attend to, acts gratuitously, and for the mere sake of advancing the cause of horticultural improvement. At present, the president is Anthony Nichol, Esq., of Kertfield, a gentleman of landed property in the neighbourhood; the vice-president is Arthur Burnett, Esq., resident sheriff of the county; and the secretary is Mr. John Stirling, one of the magistrates of Peebles, which is the place of meeting and centre of operations of the society. Besides these functionaries, there is a committee of management. The society, we observe, graces its prospectus with a list of patrons: these are certain noblemen and gentlemen in the neighbourhood, whose names and influence are

believed to be of consequence in giving the thing a respectable character in public estimation. Some of, perhaps all, the patrons contribute a small annual donation in money to the institution; but this feature, beyond what may be required at starting, we do not commend. It is most desirable that all such institutions should be self-supporting, and not rely on charitable doles. The true and safe plan of operation, is to form a fund from the regular annual fees of membership, and from sums gathered for admission to the public exhibitions. In these latter respects, the Peeblesshire Society is on a healthy footing. We observe, from the published accounts of the society, from September, 1851, to September, 1852, that the amount of subscription-fees of gardeners, amateurs, and cottagers was £13 2s.; of donations, £9 1s. 6d.; and of tickets of admission for two exhibitions, £24 11s. 7d. Matterly, the amount of tickets of admission has been about £15 each time. The amount of prizes at each exhibition is, about £14. All the money drawn is deposited in a bank, and from this fund the disbursements are made. A respectable individual is appointed to audit the accounts. Thus, the whole financial part of the proceedings is conducted in a methodic and business-like manner. The present number of members on the books is 147; and all who are members may compete. No one can compete or receive a prize, who is not a member. There may possibly be parties in the district who are not members, yet who could shew better flowers than those of regular members; but they would not be taken into account in the matter of distributing prizes. And the reason for this is evident. The whole scope of the institution is to excite emulation; and this is best done by each person having an absolute contributory interest in the concern; for when a man's own money is at stake, his perceptions are wonderfully sharpened—he sees to proper administration of funds; and, at the very least, makes an effort to get back, in the shape of a prize, what he paid out in the form of a fee.

In competing for prizes, members are divided, as above, into three classes—namely, 1. Professional gardeners; 2. Amateurs; and 3. Cottagers. Promiscuous competition is not allowed; nor would it be fair. Each class competes within itself. The first-mentioned class consists of the gardeners employed by the landed proprietors in the neighbourhood; and who, besides their professional skill, may be presumed to have means at their disposal for bringing forward plants. The second class consists of persons above the rank of cottagers; they are supposed to attend to their own gardens, with perhaps occasional assistance. The third, or cottager class, are, as stated, persons who occupy houses at a rent of not above £5 per annum, and whose means are consequently slender; and it is mainly for the improvement of this class that the society is instituted. Members of any class must be resident within the county; and no vegetable or flower can be brought forward for competition unless it has been a certain length of time in possession of the exhibitor. Besides the articles raised for competition, certain other articles are admitted to the shows, merely to exhibit as curiosities, or to evince what can be done in the district. Some plants are sent solely for the purpose of embellishing the exhibition.

It was considered desirable to have two exhibitions in the year, one in July, the other in September—the latter embracing the larger kinds of fruits. Since the commencement in 1850, these exhibitions have gone on increasing in the variety of the articles shown and the number of visitors. The exhibitions took place in the largest room of the principal inn. At the exhibition in September 1851, two imperfections in the arrangements were forced into notice. The first was, that the judges were too few in number for the work to be gone through, and they accordingly did not finish their duty of allotting the prizes till an hour-and-a-half after the time appointed for opening the doors. This, with the great crowding which ensued, made it apparent that more judges were required, and that there ought to be a much more spacious place for exhibition. Both these remedies have been applied. The judges for each show are now four in number, and are, as formerly, professional gardeners from a distance, who have no knowledge of the parties exhibiting. All things for exhibition require to be lodged by half-past 10 o'clock forenoon of the day of competition, and the exhibition opens at 2 p.m. All kitchen

vegetables require to be cleaned, and free of extraneous leaves, &c. The principal improvement in the arrangements has consisted in having the exhibition in a temporary canvass tent, of large and commodious dimensions. We invite attention to the manner in which this tent was pro-

cured, also to its size and appearance; and for the better understanding of its character, we append two sketches, drawn by Mr. John Bathgate, a gentleman filling the office of procurator-fiscal for Peebles-shire, and a warm encourager of all social improvements.

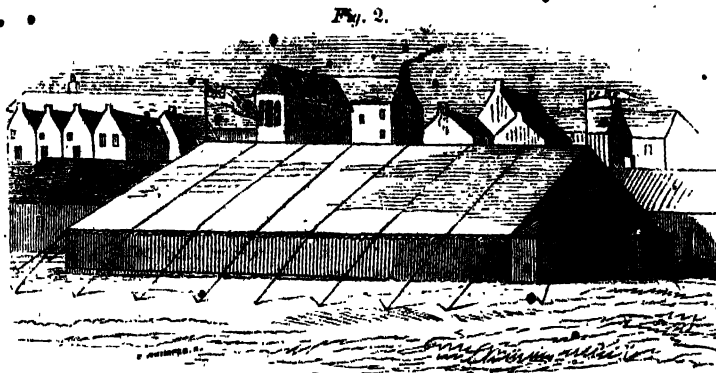
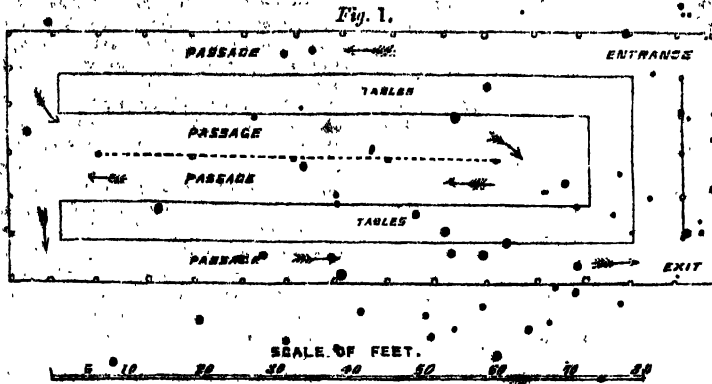


Figure 1. represents a ground-plan of the tent, with two long tables, on which the articles are laid for exhibition. These tables are of rough deal, covered with webs of calico, so as to have a clean and neat appearance. The entrance is by a kind of porch at the north-east corner; thence, as indicated by arrows, the visitors walk up the side of one table, and down the other side; then up the nearest side of the second table, and down the other side of it, to the place of exit, which is a similar porch at the south-east corner. Visitors thus proceed in a slow and continuous stream in one direction, without break or confusion. Figure 2 is a representation of the tent exteriorly, and in perspective, looking from the south-east, with the houses of the town in the background. It will be observed that the tent is a pavilion in form, being of a length about three times its breadth, with a sloping roof on its two sides. The following are the exact dimensions:—Length of the tent, 91 feet; breadth of ditto, 33 feet; height of roof at centre, 24 feet; side of span of roof, 23 feet; height of walls from the ground, 8 feet. The two porches are exterior projections. The length of the tables is 73 feet; the breadth of each table is 5½ feet; and the breadth of the passage is 5½ feet.

The substance of the tent is strong canvas, impervious to rain; but so transparent, that there is abundance of light without the aid of windows. The erection is supported on a framework of wood, held together by screw bolts. Besides the side, there are centre posts. The distance between the side posts is 8½ feet; the distance between the centre posts is 13 feet. All the wood-work has a neat and slender appearance, and is painted. The total expense of this truly commodious erection, including painting, was about £80; this amount was raised by subscription in the neighbourhood, and kept separate from the ordinary funds of the society. It may be useful to mention, that the manufacturers of the tent were Messrs. A. and D. Ferguson, Sail-makers, Dundee. It was made by them to order, and sent

ready to be put up. The wooden framework was constructed by Mr. Dickson, a carpenter in Peebles; part of it was composed of timber presented by Sir Adam Hay, Baronet; and this somewhat lessened the general expense. When erected, the pavilion has a handsome and rather gay appearance, with the Union Jack flying at one end, and the flag of the Society displayed at the other. It was placed in the Town Green, in front of the school-house; and at about a hundred yards from the Tweed.

Even with the vastly extended space in this conveniently disposed tent, there would still undoubtedly be overcrowding, but for an arrangement to be mentioned. This consists in establishing three classes of entrance fees—for the first hour, one shilling; second hour, sixpence; and the third hour, threepence. Tickets are issued corresponding to this plan, which has proved eminently successful, and has given much satisfaction. All are accommodated, and all are pleased. It should be added, that the ticket admits only once. Should a visitor go out, he cannot return without making a fresh payment. A few police-officers attend to prevent disorder; and a brass band from a neighbouring village plays outside during the exhibition.

The committee of management, which meets once a month, determines on the objects of competition and prizes to be allotted. Prospectuses containing all requisite lists and particulars are issued and distributed gratuitously, from six to nine months previous to the exhibitions. In these prospectuses there appear not only the lists of prizes of the society, but lists of special prizes offered by private individuals. Such prizes are usually of larger amount than those of the society, and in many instances apply to only one or two parishes. We may be allowed to quote two or three from the list of 1852:—

"Anne Lady Hay, for the best kept Cottage Door, and ornamented with flowers, in the Burgh of Peebles, including Tweedbridge-end, 7s.—for the second best, 5s. There must be at least three competitors for this prize."

"Lady Carmichael, for the neatest kept Cottage, in the parish of Skirling, 10s.—for the second best, 7s.—for the third best, 5s.

"W. S. Orr, Esq., Amen Corner, London, for the neatest kept Cottage, interior and exterior, with front ornamented with flowers, also best kept Garden, in the parishes of Peebles and Innerleithen, a copy of the Illustrated Shakespeare; value, One Guinea.

"W. S. Orr, Esq., to the occupant of the neatest kept Gate Lodge, interior and exterior, with front ornamented with flowers, and well kept Garden, in the county of Peebles, 10s.

"Lady Montgomery, for the finest and purest Honey, fit for the table, for Cottagers only, 10s.

"Lady Montgomery, for the prettiest Flower-Basket, made by the exhibitor, open to the whole Society, at July Exhibition, 5s.

"W. Chambers, Esq., of Glenormiston, for the most exact and best kept set of Meteorological Tables, for the year 1853, beginning with 1st of January, and ending with 31st of December, in the parishes of Peebles and Innerleithen; open to all classes of members, £1 1s. *Copies of blank forms for entering daily observations will be given by the Secretary; and intending competitors must hand in their names to him on or before the 25th of December, 1853. This prize will be awarded at the July Exhibition, 1854.

"Archibald Craig, Esq., South Bridge, Edinburgh, for the best and neatest kept Cottage Door, and ornamented with flowers, in the parish of Eddlestone, 10s.; for the second best, 7s. 6d.; for the third best, 5s.; for the fourth best, 2s. 6d. There must be at least eight competitors. It is distinctly understood that no occupant of gentlemen's lodges can compete for this prize."

It may be added, that there are likewise a few sweepstakes; the competition in such cases being a kind of wager between two neighbours as to the production of certain flowers or vegetables.

Such may be accepted as a familiar account of the Peebles-shire Horticultural Society, which, considering the character of the district, has succeeded in its praise-worthy aims beyond all expectation. The sphere of operation is a county of small size, composed principally of the valley of the Tweed, in the upper and more pastoral region of that classic stream. The district is environed with brown hills, which, though favourable to the production of mutton and grouse, are not altogether friendly to horticultural pursuits. Yet, under certain disadvantages with regard to climate, placed aloof from the stimulating movements of an energetic and busy age, and depending entirely on its own resources, this small county, through the agency of a few active-minded individuals, has started forward in the race of horticultural improvement, and its exhibitions, as regards out-door productions, are pronounced by competent authorities to equal any thing of the kind in the most highly-favoured districts of England. On a future occasion, we hope to be able to make widely known through these pages the names of those competitors whose peculiar success seems deserving of approbation.

With so much to be said in commendation, it would be strange if the proceedings of the society in question did not suggest reflections of a somewhat less pleasing character. It deserves notice, that here, as elsewhere, discussions have arisen respecting matters which, for anything that can be foreseen, already bear within them the elements of dissipation. We are the more inclined to speak unreservedly on this branch of the subject, from a desire to offer a candid and friendly warning before it be too late, not only to the members of the present institution, but to others, in whatever quarter of the country they may be placed.

The first thing to which we would thus admonitory refer, is the system of propagating plants, fruits, or other articles for competition, at an expense of time, trouble, and money, infinitely beyond the actual value of the thing, and to all appearance for the glory of obtaining a place in the list of successful competitors. Emulation, carried to this undue length, is evidently an evil. The struggle may be said to be in some respects a competition of purse against purse, instead of skill against skill, and as such, is adverse to every sound principle of economics. It can surely serve no good purpose, to produce half-a-dozen monster looks at a

cost of a load of valuable manure, or a few bunches of grapes at an outlay of £5 for extra fuel, exclusive of trouble and time beyond all reasonable allowance. A procedure of this kind is not horticulture at all: it is a vulgar forcing of nature beyond her legitimate bounds, and, if not checked, can terminate only in general disgust and disaster. Among amateurs and cottagers who employ their own means in these supernatural forcings, the practice is less objectionable than among gentlemen's gardeners; for, in the latter case, the means belong to another. No doubt, the costly experiments of these horticulturalists are in many instances effected with the sanction of their employer; but this scarcely saves the practice from condemnation. It should be the pride and duty of gardeners to conduct their operations on an economical scale, and work more by professional knowledge than the powers of excessive and costly forcing. One thing is certain, that no body of gentlemen will long continue to support any institution that causes an habitual and unreasonable outlay. It may be gratifying for a season to see their servants carrying off prizes of half-crowns; but when employers calculate that for every half-crown so gained by their gardener, they themselves are called on to expend a pound for manure, or for some special apparatus, their enthusiasm for horticulture may justly be expected to decline, and finally expire, leaving nothing but disappointment behind.

The question as to how far any class of competitors should go in the matter of forcing, is not susceptible of a distinct solution. Common sense ought to regulate the employment of means, keeping a certain end in view. Some persons have objected to the use of glass, but glass, we apprehend, falls within a proper system of culture; and, indeed, all expedients that are dictated by science and practical art, are not only permissible, but commendable. We are quite aware that on the subject of means to ends, the society has a delicate part to perform. Yet, it is the duty of a society to adopt some suitable method of placing horticultural experiment on a footing that will prove permanent and beneficial. It can never be supposed that an institution is to stand by unconcernedly, and see itself destroyed. Something it may do by way of recommendation or address, and all else failing, it may call for a declaration as to the cost of production from competitors. A hint on this subject is enough.

Another unfortunate feature of societies of this kind is the jealousy which is introduced into a neighbourhood. Numbers, of course, care not who overlook their operations, and watch the progress and quality of their plants and flowers. Others are more sensitive. They are afraid to have their gardens intruded upon, while the grand competition cabbage, or the wonderful half-dozen pet anemones, are coming to maturity. Now, this is a very undesirable terror. We like to entertain kindly ideas of gardening and gardeners of every grade, and feel that a spirit of exclusiveness is quite at variance with all that is commendable in art. The gentlest possible remonstrance on this, as on the foregoing point, is, it may be hoped, sufficient.

With these observations, we would beg to draw our account of a provincial horticultural society in Scotland to a conclusion. The institution, we are glad to learn, has already made a visible impression on the taste of the district. On the highway between Edinburgh and Peebles, stands the small village of Eddlestone, and here the doorways of the cottagers were heretofore in a most untidy condition. Now, through the efficacy of small prizes distributed by the horticultural society, the cottages have assumed quite a different appearance. Stagnant pools and dung-heaps have vanished from the scene, and plots of garden with roses and honeysuckles rise pleasingly into view. In other quarters, similar advances are perceptible. Bee-husbandry has made marked progress, and we can confidently say, that the finest honey which could be produced was shown at Peebles last September exhibition. Nor are social habits left untouched. Leisure hours, which formerly were spent in the public-house, are now devoted to horticulture. The best powers of the mind, once lying dormant, have been stimulated into activity; and with a prudent regard to means to ends, we anticipate that the society to which we have taken the liberty to draw attention, will yet achieve much higher results.—W. CHAMBERS.

COCHINS, DORCHES, AND SPANISH.

I mentioned, in a former communication upon this subject, that I was by no means inclined to think that the Cochins were the "enormous" fowls which "Gallus" and his friends asserted them to be, and my opinion has, I see, been shared in by several of your more recent correspondents. It is obvious that this is a question upon which a tolerably satisfactory conclusion may be arrived at, and that without much trouble.

It is important, however, first to determine what the question in dispute really is. If, as "Gallus" now contends, it be whether fowls averaging, say, seven pounds each, do, or do not, consume more than fowls of another breed averaging four pounds or five pounds each, what is the use of the controversy at all? But if the question to be decided be, as I and others have always contended, and as is obviously the reason of the thing, which is the most profitable breed of fowls to keep, the solution depends upon which possesses most advantages and exhibits fewest defects. (The important advantage undoubtedly would be, that a particular breed should consume less food than another, having regard to the quantity of food, or rather, perhaps, to the value of the food which it should itself return to them. In this calculation size would be an essential ingredient. If a farmer, for instance, has two breeds of pigs, and one of them will attain thirty stones in weight, and the other only twenty, can he not afford to give the former more food than the latter? Unless the bacon be very deficient in quality, it is manifest that he can.)

But if the abstract position for which "Gallus" contends be tenable—viz., that size has nothing to do with the matter—the question of utility is gone, and the Bantam (or, in the case I last put, the little pig!) beats all the other breeds, simply because, being smaller, it consumes less food.

From these considerations it is obvious that the true question is, as I have stated, which gives the best return for the outlay, and, in this enquiry, that size is a principal ingredient. And if a few impartial experimenters be honestly made the question can be solved with little difficulty. I, therefore, beg to give you, and, through you, to your readers, the result of one such trial, explaining first how it was made, in the hope that others will make similar attempts to give us the benefit of their experience.

I have no Dorkings; but, as I have before stated, I keep Cochins and Spanish. Their roosts are equally good in all respects, and are situate at opposite ends of the same plantation, into which they both run, but at such a distance that they never mix with each other. Neither has any advantage over the other that I am aware of. There are twenty-nine Cochins, and twenty-three Spanish, and to the latter I added three common fowls (bought for killing) to make the numbers more uniform. The proportions of young and old were alike, and in each lot were three cocks. I fed with whole barley, and with meal; the latter of three sorts—barley, bean-meal, and pollard, or sharps. They have the soft food twice a-day, in cast-iron troughs, as much as they can eat, and if they leave any it is carefully gathered up. The barley, in hoppers, they have to run to when, and as often as they please.

I thought I could not make a fairer experiment than this, but after being absent for three days, I found that two small Turkey poult (weighing together 17 lbs.), which had before been fed with the Spanish, had not been removed, according to my orders. I therefore determined to let them remain during the rest of the week, and to my surprise, I found at the end of seven days that the two lots had just consumed the same quantity, each having eaten 24 lbs. of meal and 30 lbs. of barley.

I now removed the Turkeys, and the death of a Spanish cock reduced the number of Spanish to twenty-five. During the second seven days, the twenty-five Spanish ate 15 lbs. of meal and 20 lbs. of barley, and the twenty-nine Cochins, 24 lbs. of meal and 30 lbs. of barley.

This, in the latter week, gives an average of 25 ozs. for each Spanish fowl, and 30 ozs. for each Cochin, or a proportion of five to six. But the Spanish lot weighed together 111 lbs., averaging only 4 lbs. 7 ozs. each; and the Cochins weighed together 195 lbs., or 6 lbs. 30 ozs., or 100 ozs., each being two to three within 1 oz.

I am by no means desirous that any one should consider such a question settled by a single experiment, but I am not aware that a fairer one than this (for the accuracy of which I pledge my honour) could be made, as both the corn and meal were taken from the same sacks. I shall, however, be obliged, for one, to any of your correspondents who will make similar trials, and favour the poultry-keeping world with the results. I am still open to conviction; but, as at present advised, I am of opinion that the public favours bestowed, as it has unequivocally been of late, upon the Cochins, has gone in the right direction, and that, for all useful purposes, they are the best breed of fowls yet introduced into this country.

I took the liberty, in a former paper, to say that I anticipated that Mr. Sturgeon's sale would afford a strong proof of the general verdict being in their favour. I was favoured with a marked catalogue of that sale, and I subjoin a statement of the average prices realised. It is only necessary to a proper understanding of this paper, to remind the reader that the stock sold at the sale (except the few lots designated as "sundries") was the produce of one of other of these cocks, named respectively, Sam, Patriarch, and Jerry. The result of the sale was as follows:—

Sire.	Cochins of 1852.	Sold for	Average of Cochins.	Pullets of 1852.	Sold for	Average of Pullets.	Average of both Cochins and Pullets.
Sam	21	£ 61 5 0	3 1 3	35	£ 143 13 0	3 10 2	3 10 5
Patriarch	22	73 7 6	3 4 9	30	107 12 6	3 11 0	3 7 9
Jerry	23	76 5 6	3 4 2	21	82 11 0	3 18 7	3 12 5
	67	£ 213 18 0	3 3 8	87	£ 333 16 6	3 16 8	

	No.	Sold for	Average as above.	
Cochins	67	£ 213 18 0	3 3 8	
Pullets	87	333 16 6	3 16 8	
Sundries	154	£ 547 14 5	3 12 0	Average of Chickens of 1852.
	172	612 11 6	3 11 2	Average of the whole Sale.

Can I be wrong in concluding, from the sale by public auction of 172 birds to 62 different buyers, at an average rate of £3 11s. 2d. each, that the verdict of the public is in favour of

COCHINS.

P.S. I have forgotten to mention that from the Cochins I had, on an average, eight eggs per day, but from the Spanish only four eggs per week.

FEEDING BEES.—A CAUTION.

On examining, yesterday (Dec. 14), one of my best hives of bees, I was surprised to find that they had only a few ounces of honey left. This hive swarmed on the 17th of May, and unfortunately threw a maiden-swarm on the 1st of July. This, no doubt, weakened them considerably, but it plainly shows what a wretched honey-season it must have been. These bees, which seemed so very active and strong, could not collect, since the 1st of July, sufficient food to keep them until Christmas.

This extraordinary mild weather will cause a great consumption of honey, and bee-keepers will do well to look sharply after their stocks.

The thermometer has ranged each day, for the last fortnight, from 48° to 55° in the open air, and in a northern aspect, at mid-day, a week ago, the ivy near my house was crowded by bees. Probably the immense glut of wet weather had retarded the blossoms, as I have seldom noticed them on the ivy after the middle of November.

The bees alluded to above were the best I have in my garden, as I thought them, previously to yesterday, and certain of going through the winter without feeding. I calculated that they had from 15 lbs. to 16 lbs. of honey, from their great activity during the months of June, July, and August.

I am much indebted to Mr. Payne for many useful hints, and I think he will bear me out this time in my caution, although most likely it may come too late for many unfortunate stocks.

H. W. NEWMAN, New House, Stroud.

POULTRY SHOWS.

We have been favoured with the following note from one of the committee of *The Great Metropolitan Show*. We are glad of its removal, not only because it is now separated from all connection with a tavern, but because it will be much easier of access, and the poultry will be more comfortably lodged; at the same time, we more than regret that the committee persevere in what they know is wrong, by keeping the birds in the pens for so many days.

"It is quite true *The Great Metropolitan Exhibition* is postponed, and the place of exhibition changed to the Baker-street Bazaar, in consequence of the proprietor of the Oval having notice from the solicitor to the Duchy of Cornwall, that no exhibitions of any kind would be allowed on his ground. The committee were, therefore, taken quite by surprise, and you may imagine their chagrin and annoyance at such information, when a beautiful and most expensive building was all but finished. The committee, therefore, immediately waited upon the spirited proprietor of the Baker-street Bazaar, who immediately acquiesced to their terms and application, and we congratulate the public and exhibitors in having secured a more central, more convenient, and more agreeable locale; and we are pleased to add, but two of our exhibitors are inconvenienced by the change. The entries close on the 4th of January; the specimens will be received on Friday and Saturday, the 7th and 8th of January; the birds will be judged on Monday the 10th; and the Exhibition open to the public on Tuesday the 11th, Wednesday the 12th, Thursday the 13th, and Friday the 14th; the same days as at Birmingham.

"We have upwards of 1,000 entries, not 1,000, as erroneously stated by a penny-a-liner, who must have mistaken an O for a U."

We are indebted to Mr. J. J. Nolan, the well-known poultry-fancier of Dublin, for the following report:—

"The Dublin Amateur Poultry Society had their first show in the spacious round room of the Rotunda, under the patronage of our Vice-Queen, the excellent Countess of Eglinton, who inspected each pen minutely, and proved herself a scientific connoisseur in her selection of some of the finest specimens, which subsequently, and deservedly, obtained the first prizes in each of their classes. A lot of Black Polish, in pen 118, took her Excellency's particular attention. The Embden Geese, with other lots, she commanded to be forwarded to the Vice-Royal Lodge, Phoenix Park.

"The arrangements of the room were judicious, much after the manner of the English Exhibitions, and in the evening it was lighted with gas, and formed an excellent promenade, but the music in an adjoining room was a total failure. This was the first attempt here of having a Poultry Show secured from the inclemency of the weather, and was found most agreeable to the visitors, as well as to the birds. What Dublin poultry-fancier does not recollect 'the pelting of the pitiless storm,' when the lofty elms in the Dublin Society's yard were levelled to the earth, and the poultry pens performed their evolutions through the lawn! We hope to see all future Poultry Shows, as in the present case, comfortably provided for."

"Lady Downville added to the Exhibition a splendid collection of Water-fowl of great rarity and beauty, in which was the Cereopsis and Bar-headed Geese, with other rare varieties, which would be an acquisition to any Zoological Collection.

"The catalogue, though not long, being of only 211 lots, consisted of, perhaps, as good specimens as any Great Britain can boast of. Several lots changed hands at high prices. There were but few inferior birds. The Pigeons were select and in good feather.

"I perceive we have a new candidate for poultry fame, in the person of a Miss H. Gardiner, who seems to have spared neither pains nor expense in procuring the best specimens of the most approved varieties, and as the prize list shows, her stock was so varied and excellent, they were a real attraction and acquisition to the Society. If report speak truth, she is determined to promote among her tenants the best procurable fowl, to be distributed to them as one of the industrial resources of the country, and to

add to their comfort. I am prepared to make a record of the feelings of such a lady proprietress, and hope it may be speedily followed by our Irish nobility and gentry; and while on the subject, have to regret that some of this lady's birds, procured at considerable cost, to meet the wordings of the amateur prospectus, should be, by either neglect or design, improperly classified, or entirely omitted; and her Aylesbury Ducks, said to be the best in the room, called Labrador! How the managers could mistake the White Aylesbury for the Black Labrador, is of difficult explanation.

"Our judges, unfortunately, are the relatives or friends of the exhibitors, and what Irish judge is so immaculate as not to feel an erroneous prejudice in favour of his friend, particularly when they walk out with printed catalogues in their hands, in which is set forth the names and addresses of the exhibitor; at the same time, I am satisfied, from Sir Edward Brough's high standing and good taste, he does not feel complimented at being awarded a premium for lot 102, which, undoubtedly, should have been announed *no merit*. I would advise, as at the English shows, the judges to be brought from a distance. I am glad that the error of awarding a premium to Mr. Dombain for three chickens, in lot 93, instead of four, has been withdrawn. If such errors be permitted it will be the certain dissolution of the Society; and being a true fancier, and the oldest and first amateur in Ireland, I should regret it of all things. I therefore beg their strict attention to their own rules.

"Now, as to the selection of their officers. I should recommend its being done by a majority of their members, and not by self-appointments. They are more likely to appoint men of intellect, and not persons who have made so many errors in their prospectus, their catalogues, and their premium-lists.

"While on the subject of poultry, it may not be out of place here to remark a new nomenclature adopted at the Birmingham Show. The birds usually known through England as *Bolton Grays*, *Bolton Bays*, *Dutch-every-day-layers*, *Pencilled Dutch Fowl*, *Chilliprats*, &c., are denominated *Pencilled Hamburgs*; and the birds known and exhibited in England at the poultry clubs, denominated *Spangled Pheasant Fowl*, from their markings approaching to the brown Pheasant, each are called in the Birmingham list, *Golden-spangled Hamburgs*. Now, what they are called, appears to me of little consequence, so as it is one general name known and understood by all; but when it varies from what has been known and established for the last century, it cannot but cause confusion; it would, therefore, be well if the principal poultry amateurs would communicate with each other on the subject, and adopt one general nomenclature."

The Judges in Poultry were—The Hon. Captain Arbuthnot, Thomas Rutherford, and Isaac D'Olier, jun., Esqrs.

In Pigeons—A. H. Darley and W. Mason, Esqrs., whose adjudications gave general satisfaction.

The following are the awards of the Judges:

SPANISH.

Section 1. (Birds of two-years-old and upwards).—No merit.

Section 2. (Birds of 1851).—John North, Esq., Clarinda-terrace, Kingstown.

Section 3. (Chickens).—George Farrin, Esq., Bullock, Dalkey.

DORKING.

Section 1. (Birds of two-years-old and upwards).—Lieutenant-Colonel Hill, Oatlands, Castleknock.

Section 2.—Mrs. Gresham, Bellegrave, Clontarf.

DORKINGS (WHITE).

Honourable C. H. Lindley, Island House, Island-bridge.

MALAY.

Section 1.—Mrs. Franklin, Cottager, Cabra.

Section 2. (Chickens of 1852).—Mrs. Gresham, Bellegrave, Clontarf.

COCHIN-CHINA.

Section 1. (Birds of 1851).—Mrs. Gresham, Bellegrave, Clontarf.

Section 2. (Chickens of 1852).—Mr. William Ledwich, Mary Villa, Ball's-bridge.

DUTCH OR BOLTON GREYS.

Section 1. (Birds of two-years-old and upwards).—Lieutenant-Colonel Hill, Oatlands, Castleknock.

Section 2. (Chickens).—Lieutenant-Colonel Hill.

GOLDEN HAMBURGH.

Section 1.—No merit.

Section 2. (Chickens).—Mrs. Cans, St. Wolstan's, Celbridge.

SILVER HAMBURGH.

Section 1. (Birds of two-years-old and upwards).—Richard P. Williams, Esq., Drumcondra Castle.

Section 2. (Birds of 1861).—Sir Edward Horough, Bart., Coolock.

Section 3. (Chickens).—Richard P. Williams, Esq., Drumcondra Castle.

GAME FOWL.

Section 1. (Birds of two-years-old and upwards).—William Madden, jun., Esq., James's-street West.

Section 3. (Chickens).—Charles Watkin Williams, Esq., Richmond.

BANTAMS (SERRAILED).

Section 1.—Miss H. Gardiner, Reigh's-buildings, Clontarf.

Section 2.—Miss Louisa Cane, St. Wolstan's, Celbridge.

POLISH.

Miss H. Gardiner, Reigh's-buildings, Clontarf.

Norfolk Turkeys. (Best Cock and Hen).—Mrs. Booker, The Parsonage, Killuran. P. J. Kearney, Milltown House, Clonmillan.

POULTS OF 1862—AMERICAN TURKEYS.

Section 1.—Miss H. Gardiner, Reigh's-buildings.

DUCKS.

ATLESBURY. (Best Drake and two Ducks).—Mrs. Warburton, K.M., county Kildare.

DUCKINGS OF 1862.—Richard Chaloner, Kingsfong, Moynalty.

ROVEN: BIRDS OF 1861.—Richard P. Williams, Esq., Drumcondra Castle.

DUCKINGS.—Richard P. Williams, Esq.

GESE.

Miss Gardiner, Reigh's-buildings.

GOSLINGS.

Rev. Thomas Adderley Stopford, Clongill Rectory, Navan.

PIGEONS.

CARRIERS (Black).—Prize. Mr. A. Le Clerc, Philippsburgh-avenue. (White and Dun).—Mr. Dobbyn, D'Olier-street. Recommended.

POUGERS (Blue).—Mr. P. Jones, Amien-street. Recommended.

RUNTS.—Mr. Le Clerc. Recommended.

TURBETS.—Mr. Le Clerc. Recommended.

BAKES.—Mr. Dobbyn. Recommended.

JACOBIENS.—Mr. Le Clerc. Prize.

TUMBLERS (Bald-pated).—Prize. Mr. Richard Wildridge, Lower Mount-street.

TUMBLERS (Almond).—Prize. Mr. Dobbyn, D'Olier-street.

TRUMPETERS.—Mr. Le Clerc, Philippsburgh-avenue. Recommended.

RABBITS.

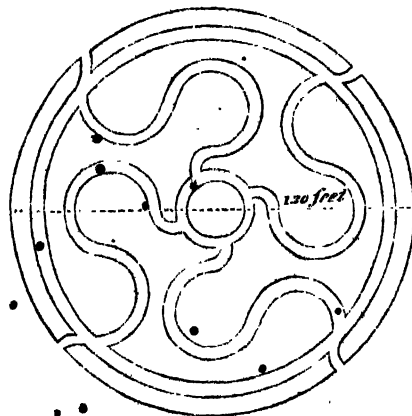
Mr. Le Clerc.

For the following particulars relative to the late *Birmingham Poultry Show*, we are indebted to the *Midland Counties Herald*, and, therefore, all the statements may be accepted as perfectly correct.

"With regard to the attendance, we have to add that it was very large, notwithstanding the unfavourable weather, and that the receipts exceeded those of any former occasion. The numbers of visitors, exclusive of subscribers, were as follow:—Tuesday, 1,705; Wednesday, 9,326; Thursday, 12,280; Friday, 9,728; making an estimated total of more than 37,000. The money taken at the doors amounted to £1,840, and the sums received for the sale of catalogues to £270 4s. 6d. Among the visitors were the pupils of the Deaf and Dumb Institution, who were admitted gratuitously on Friday morning, and who appeared highly delighted with all they saw, but more particularly with the Poultry Department. To the information relative to the sales of Poultry, contained in the *Herald* of Thursday last, we have to add that they reached to £1,686 15s. 6d. in the four days during which the Exhibition remained open. One object of these shows is to afford facilities to persons who wish to purchase such stock as they may require; and all contributors are required to affix a price to their specimens; but where no intention of selling exists, parties may, and, as is well-known, frequently do, name a sum which is prohibitory, or intended to be so. Sometimes, however, such calculations prove to be erroneous. The pen (294) of Cochin-Chinas, the property of Mr. James Cattell, of this town, which carried off the first prize in Class 12, found a purchaser at £50; and as a proof of the early maturity of the breed, as well as the excellence of the stock from which they spring, it may be proper to state that the three pullets, hatched on the 20th of April, weighed, when sent to the Exhibition, 9½lbs., 9½lbs., and 8½lbs. respectively. Amateurs may also be interested in knowing that the buff cock exhibited by the same gentleman, contained in the pen which obtained the second prize in Class 11, the sum of twenty-five guineas was offered by a very eminent dealer, and declined. This is the same bird which is figured in the Illustrations of

Domestic Poultry, recently published, and for which a similar price was offered at the Yorkshire Poultry Exhibition, held at Halifax, at the commencement of the present year, where he received the premium for the best male bird of any variety in the yard. We may further state that one very eminent cultivator of the Cochin-Chinas, fearful the price of fifty guineas might not preserve to her the possession of her birds, which were very admirable ones, bought them in, paying the usual commission of five per cent. Other sales took place at very liberal prices. For a pen (272) containing a cock and pullets in Class 12, exhibited by Mr. Thomas Roscoe, of Prescott, thirty guineas were paid; for another pen, (372,) the property of Dr. Gwynne, of Sandbach, £30; for another, (410,) belonging to Mr. Punchard, in Class 13, £25; for another (432) of White Cochins, belonging to Mrs. Herbert, of Powick, twenty guineas; for a pen of Dorkings, (448,) fifteen guineas; for a pen (476) of the same variety, shown by Mr. Y. R. Graham, of Yardley, twelve guineas; for a pen of Black Polish, (823,) shown by Mr. Edward Hewitt, of Sparkbrook, twelve guineas; and for a pen (902) of White Polish, from W. G. Vivian, Esq., of Singleton, Glamorganshire, twelve guineas. A pen of Toulouse geese, exhibited by Mr. John Taylor, jun., of Cressy House, Shepherd's Bush, London, sold for fifteen guineas; numerous other pens of poultry, of various kinds, being taken at £12, £10 10s., £10, and other smaller sums."

AN AMERICAN GARDEN.



THE accompanying plan is a garden expressly for the cultivation of what are commonly denominated American plants. They are beautiful objects as planted in the shrubbery, but, to be seen to perfection, they must have a piece of ground expressly for themselves, where they can be arranged according to their respective heights, and contrasted in colour. The principal advantages arising from this plan are—that it is very compact; that it is quite the fashion; and, lastly, that it is likely to remain so without change.

It matters but little what the aspect of the garden is, provided it is placed on a gentle declivity, so as to admit of being properly drained. Having chosen the situation, the next thing will be to clear the surface of turf, or what also may be upon it; then, after marking out the beds, to have the natural soil taken out to the depth of two feet, remembering to let the bottom slope gently towards the centre, where the drains will be placed. On this I lay particular stress, for without good drainage, in all places, and under all circumstances, the richest soil will very soon become sour and sterile, and the healthiest plants will soon turn yellow, and linger out a miserable existence, to be succeeded by others equally unfortunate. Common drain tiles do very well, provided they rest on soles, without which, I believe, they are of very short service.

Soil.—As there is a mixture of plants, so there must, necessarily, be a mixture of soil; good turfy loam, not cut too deep, one-part, sand one-part, and fibry peat (not bog) two-parts. These, if chopped up and well mixed together, will meet the wants of all the plants. Take advantage of a

sharp from the wheel in the soil, which ought to be emptied off plants, remembering to fill the beds six inches higher than the surrounding ground so as to allow for subsiding.

Plants.—These will consist of *Rhododendrons*, *Azaleas*, *Kalmias*, *Andromedas*, *Ledums*, *Gaultherias*, *Rhodoras*, *Vacciniunis*, *Erics*, *Epigeas*, *Menziesias*, *Daphnes*, *Rampetums*, *Fabianas*, &c. These form the heads of the various families, but the individual members had better be selected by the planter when in bloom.

Planting.—The principal things to regulate in this are colour, distance, and ultimate height. First of all, let the colours be so arranged that each plant forms a contrast to its neighbour, and to do this effectually it ought to be done on paper first, so that one may have time to give it an hour or two's consideration. By so doing the work will be done about systematically, and not with that bungling which is sure to follow an arrangement the mere impulse of the moment. Sufficient distance from plant to plant is very seldom given. We can see this every day in our plant-houses, wall-trees, flower-garden, &c. By giving one plant the space generally allotted to two the result will be far more satisfactory. Ultimate height ought to be kept in mind, so as to have the tallest plants in the middle.

Walks.—If good gravel is to be had nothing will beat that for walks in this garden; but if that is of an indifferent quality, then let them be made of asphalt or concrete, and edged with stone, slate, or neat paving-bricks.

After-treatment.—The plants will require to be supplied with water for the first summer or two after planting, and mulching will be of great service to them in long-continued drought. Digging amongst them is a practice which ought never to be tolerated; for by so doing all the surface-roots (and they are in all cases the best) are cut off, which sends those left down to the bottom in search of food, which is generally of an indifferent quality; hence, disease which is so often met with.—J. RUST.

POULTRY DISEASES.

WHITE COMB IN SHANGHAES.

A CORRESPONDENT writes as follows:—"Some months ago I wrote to you for information and advice about a disease that has appeared amongst some Coochin-Chinal fowl, and which seemed to have been introduced by a cock purchased of Mr. Punchard. After that, other complaints seem to have been made to you about the same disease. A name was given to it, and a remedy pointed out, viz., to anoint the bird with oil and turmeric. That cure seemed to answer, though not entirely, and is apparently of no use after a certain stage of the disease. And observe that one or two able remarks have been made through your publication, on the cure of disease of poultry, I am induced to note fully my observations on the disease in question, with a view to ascertain what it is, and the remedy.

"The disease first appears on the comb, which appears white and crisp, it gradually extends down the neck, and the feathers fall off. Old birds and chickens seem equally liable to it. It seems like a sort of scurf, which gradually extends all over the body. The bird seems apparently unaffected in health; it eats voraciously, but on examination it will be found poor and thin, as if the food furnished not its proper nourishment. After a while this scurf appears thick about it, apparently in a moist state; afterwards the feathers, when the bird is let out in the morning, seem to be in a matted state, just like the feathers of a drowned bird; on examination this will be found to be a sort of grease; during the day the grease evaporates, and the feathers become apparently dry; at this stage the bird begins to show signs of weakness, it afterwards refuses its food and dies.

"My full-grown birds all quickly recovered the disease, but not so the chickens. Mr. Punchard's cock had to be destroyed. I do not understand the nature of the disease, nor its cure, but it has often occurred to me, whether feeding birds with grey peas had anything to do with it. I understand Mr. Punchard gives his some occasionally, but unless accompanied with salt or something else, it seems to me that such a food must have a bad effect on the blood.—K."

In making a few remarks on the above, I must beg to be

understood as offering them as suggestions only, having had no opportunity of seeing the white comb.

I regard many of the diseases to which Poultry are subject as arising from high feeding and stimulating food. Peas and other leguminous seeds, as beans, tares, &c., contain a very large proportion of a substance which in its chemical and nutritive properties closely resembles animal food, the effect of their use in large quantity, or if long continued, is very likely to be the production of such a skin disease as that described. With regard to the treatment I am equally at a loss; our Editor states positively, that if cocoa-nut oil and turmeric are applied at intervals of two or three days, as soon as the white comb appears, it is a specific. In our correspondent's cases the disease is evidently beyond the reach of any local remedy. I should suggest the separation of the sick bird, a plain, unstimulating, wholesome diet—say of oatmeal and water, with a supply of green vegetables, and the administration of some alterative medicine, as flour of sulphur, ten grains, and calomel one grain, given every other night; or a three-grain Plummer's pill might be given instead. I should be glad of an opportunity to investigate the disease in any cases near town.

One slight error occurs in our correspondent's account respecting the moisture on the plumage in the morning. This cannot, as he suggests, be grease, as in that case it would not become dry by exposure to the air during the day.

W. R. TEGETMEIER.

EARLY PART OF THE LIFE OF THE POOR MAN'S WELL-WISHER.

I WAS born of very poor parents; in fact, they were so poor that when I was two years old we were all in the work-house together, where we remained about one year; my father then obtained employment at the iron works in Staffordshire, where we all went to live; and I will now tell you the reason that I say all of us. My mother was the mother of fifteen children, and there are eleven of us living now; so we are not a very few. In about six years time the iron works failed, and we again came to the workhouse; and, as I was then nine years old, I was drawn apprentice to a farmer, but as I was very small the farmer gave an old aunt of mine £3 to take me off his hands, where I remained, by going to drive the plough, tend to bird scaring, to stock turnips, and so on, till I was fourteen. I was then off to service, and I do not think that ever I cost any of my relations twopence since; and it now remains for me to tell you how I have got on since that time.

The first thing that ever I tried to get hold of was learning. Now, I must inform you, that when I was a boy schooling was very dear; and, as I said before, my parents were very poor, so it was but a very little schooling that came to my share. But do you think that I was going to be a duncie because I could not go to school? Not I, indeed;—the greatest desire of my heart was to be a good scholar, and there was nothing going to be left untied that was likely to help me in gaining my object. The first thing that I had to do was to learn to read, and I will now tell you how I did this. I had a little Common Prayer Book by some chance, but who gave me that book I cannot tell, and our minister was so kind as to give me a little New Testament. Now, these two books were what I learned to read in. I had learned a little before, for my old aunt had taught me my A B C, and a—b—ab, and so on. Now, with these two books under my arm, you may depend upon my having gone to church as soon as ever Sunday came. If I did not, it was not my fault. Now, when I was at church, I was at school, and the minister was my schoolmaster. I always read on a little before the minister, and when I came to a word that I could not tell, I spelled it over, and when he came to it, his reading told me what it was, and I was then sharply off to another sentence, and so on.

So this is the way that I learned to read. In my next, I will tell you how I learned to write.

NORMANDY.

(Continued from page 171.)

THE way in which the English are regarded by the more retired inhabitants of Normandy is somewhat curious; there is a theoretical hatred, and a practical goodwill and kindness between the parties. The memory of the ravages committed by our nation during times of warfare still exists. Norman mothers, to the present day, quiet their turbulent infants by the threat that the English are coming, and will carry them away. Not that we have been more brutal enemies than any other set of men who carry fire and sword into a foreign country; but all warfare is dreadful, and we Englishmen, so long as we remain in England, have no conception what a horrible thing it is to be the seat of war. A Norman gentleman told me that when he was a little boy, he had heard from his nurses such frightful stories of these invasions, that he used to long to meet with an English boy, to beat and persecute him in revenge. But the remembrance of this traditional enmity in childhood did not prevent the display of much civility, and even kindness, to a representative of the once hostile nation. An Englishman who knows how to conduct himself properly will have little to complain of during his sojourn in any part of Normandy.

The Normans have the credit of driving hard bargains; but this talent is exercised quite as much at one another's expense as at that of "the stranger." I witnessed one or two pretty little instances of Norman oft Norman, with well-acted anger, followed by genuine reconciliation, and a strong contest after gross absurdities on both sides. It should be mentioned, that those travellers who land at Havre-de-Grace, and proceed by railway to Paris and back again, are not to suppose that they thereby know Normandy. Le Havre, as we ought to call it, has no character at all, unless we allow its own motley and Babel-like qualities to distinguish it from other towns in general; and it has the very disagreeable peculiarity of being, for France, excessively dear. But however grasping the Normans may be, the inns in the western departments are not exorbitant. A franc a day and night for a chamber, in which, if the floor is not all that could be wished, the bedding is always beautifully clean; a franc-and-a-half, or two francs for a mountainous breakfast; two francs, or two-and-a-half for a dinner to match, with a bucket of *boisson* each time if you like; and a franc a day, or less, for all sorts of attendance, ought not to be grumbled at. It is perfectly true, though scarcely credible, that in Calvados and La Manche you may travel half-a-day by the diligence, and when you get out, and give your carpet-bag to a porter, the *conducteur* will politely wish you good day, and not ask you to remember him—to my mind a memorable fact.

Last year, throughout Normandy, there were more apples than they knew what to do with; it was not easy, on the spur of the moment, to find casks enough to contain the overflowing supply of *cider* and *boisson*. This year, people say that there are none, and that they shall have to drink old and dry *cider*, without much sweet or new by way of a change. The truth is, that the apple crop is very partial; in Calvados there are few, but about Avranches (a most rich and lovely district,) there are plenty; and the innumerable ungrafted pear-trees which line the roadside, are laden with their small, dark-green fruit, which will all help to replenish the *cider-vats*: so the lovers of *boisson* need not quite yet fear being compelled to take refuge in wine and water.

(To be continued.)

TO CORRESPONDENTS.

CHARACTERISTICS OF A BLACK BANTAM.—A good specimen of the black Bantam cock should not exceed fifteen ounces in weight; his characteristics would be a well-developed but angular and firm rose comb, terminating in a point behind, with face and wattles of the same bright carmine; plumage wholly black, with a metallic tint thrown over it of a rich purple hue, close-feathered; the flight feathers of the wing rounded at the extremities, and carried low; head fine, with a clear prominent eye; neck erect, and, when the bird is excited, so thrown back as almost to meet the tail, which latter should be full, and free from any stain in colour; its sickle feathers are seldom prominent till the end of the second year; back short, not more than two inches intervening between the termination of the neck hackle and the root of the tail feathers; breast wide and deep; thigh short and sinewy; shank clean, and of a dusky-

gray tint. The hen is of duller colour, and less striking appearance throughout. Her comb very diminutive, and its colour dirty purple; the shank of the leg is also darker than in the male; but in both sexes a generally well-proportioned figure and erect carriage should at once arrest our attention. The cock possesses most indomitable courage, and the hens are excellent mothers; but our own pullets seldom laid before their eighth or ninth month. Dealers' prices, for good specimens, would range from one to two guineas each.—W.

GURNEY LILY (Inquirer).—How should this Lily be treated after flowering? By ceasing the bulbs over the garden wall, and thinking no more about them; for they are of no more use in this country. If you keep them in the pots all winter, and give them plenty of air and water till the leaves are ripe, they would do for an emigrant to Australia. Any nurseryman will understand *Fairy Bells*, and send you a score for 20 many shillings. They are *Miniature Chinas*.

POLYANTHUS NARCISSUS (Old Hall).—Let your "very large" *Grand Monarque* *Polyanthus Narcissus* alone; it is doing very well indeed in putting forth its shoots. Give it abundance of water, and of air, but not much heat after the flower-stalks appear. After flowering, water it well, and turn it out of the pot, planting it in a very sheltered place; and if the weather is dry next April and May, water it once a week, and next year you will have three large roots instead of one. No one can tell now if the three divisions will flower this year, but probably not.

COMMANDER-IN-CHIEF GERANIUM (Yorkshire Gardener).—Plant it out in the flower-beds, by all means, at the proper time; but why not make cuttings of the tops of the shoots early next March, and so have six or seven plants instead of one? The colour is most beautiful, and nearly scarlet. It is one of the best pot-plants of all the Horse-shoe tribe, and perhaps it would be as well for you to keep it in the pot all the summer, by plunging pot and all, and not neglecting to water it now and then, particularly at first.

EXPERIMENTS WITH POULTRY.—In No. 217, for November 25th, your correspondent, "Shanghai Mandarin," has given my opinion respecting the Gallic experiments; and, in addition to his statements, I have only to say, that I think fowls for such trials should be in the same condition; for it appears to me, from what "Gallus" says, that in all probability his Spanish fowls had finished moulting, and were in a state of rest, while one of the Shanghaes he admits was laying, and the others were most likely moulting; and while making new coats must require more food.—B. P. B.

PROMPTNESS TO SITTING.—A correspondent, in the same number, complains of the pertinacious desire to sit displayed by the Shanghaes. My plan is to shut up such hens that are broody, which I do not wish to sit, for a few days, giving them plenty of food and water; and they generally begin to lay again in about a fortnight. With respect to my Shanghae hens, if they persist in sitting in their confinement I move them, or coop them out in the yard, which has always overcome the hatching fever in three or four days. Allow them plenty of water, and do not starve them, as some recommend, as the better the hen's condition the sooner will she recognise laying.—B. P. B.

SICKLE FEATHERS IN SHANGHAI COCKS.—In the number for December 2nd, I see, in answer to "Brixton," respecting the tails of Shanghaes, the following:—"but we are quite sure that cocks of the pure breed have no sickle feathers." Allow me to inform you that that "we," whether Editorial or Departmental, is in error. It is true the sickle feathers are small and dwarfish, but, nevertheless, are present in birds of full plumage, though I greatly suspect fashion causes some of them to be minus. My breed was kindly sent me by Captain —, the same from whom Mr. Sturgeon received his first stock; and he assures me they are pure. I have a cock from Anster Bonn, and two large dark red cocks, all of which have real sickle feathers, though small, not standing so high as they do in other fowls, and not readily distinguishable from the side-sickles. The sickle and side-sickle feathers are the primary tail coverts, the centre pair being the longest.—B. P. B. [We quite agree in this: what we understand by "sickle feathers" are those large curved ones in the tail of the Dorking cock.—E. C. G.]

FEEDING POULTRY.—The best way to feed fowls, or other poultry, in confinement, is to let them have food always at hand (if it can be kept from vermin). The reason is this, that after the first few days they become accustomed to find the food always before them, and only take a small quantity at a time, consequently, do not eat so much; therefore, it is cheaper than feeding at stated times, when they fill their crops as full as possible; and not to feed sufficiently is no economy, at least, if any return is looked to.—B. P. B.

PEAT CHARCOAL FOR CAMELLIAS, &c. (J. B. J.).—We have not used Irish peat charcoal as you propose, but there can be no serious objection to a little in the compost. Our nurserymen, however, do not dabble much in those things; give them a good fibrous peat, silver sand, and a sound mellow loam, and they can grow anything. Mr. Errington proceeds just the same for the *spring-down* system of peat-shoots as formerly; firm is immaterial, distance the main thing. The leading shoots should be about ten inches apart; if parallel, all the better. Indeed, there does need caution in using *any* peat on hot surfaces. You may smear it liberally on any pipe which never can become too warm to be held fast by the hand—say about six ounces to a thirty-foot long house, and of the ordinary width and height of a full-sizedinery. *Lucidula guttissima* will be found to grow well in an intermediate house.

SOOT (Orchard).—I am glad that you have put the inquiry, and knowing that such was used on the strong clays of Devonshire, I immediately wrote to my brother-in-law, who farms about three hundred acres there. The following is his reply, and I am sure it will interest hundreds. **R. HAVINGTON.**—"I have never used soot as a top-dressing for beans, but have done so with advantage on strong clayey wheat land, to wheat, oats, vetches, and grass, at the rate of three to four imperial quarters per acre. I find the best time for sowing is in March or April, in cold moist weather; it ought on no account to be sown in dry windy weather, or part of the dressing will be carried off to the adjoining land. The price paid by me is four shillings per quarter, and the sweep, at that price, comes to sow it when required. I roll as soon as the land is sufficiently dry. There is no danger of its being washed off, except by a heavy land-flood. I have not heard of any implement to sow it with. I should

advise those who have room to sow away soot, to take it in all the year round as the sweeps bring it (which they are glad to do even at a less price). You can measure it with your own basket, and prevent the importations one is subject to on fetching it at the time it is wanted. I may here mention the tricks they adopt: In sending for soot, your man, however careful, is almost sure to be cheated. The sweep often carries the soot out in sacks, your man (or yourself, if you like it better) sees the first sack or two filled with proper measure, but such a dust is kicked up that it is impossible to breathe in the place; you then stand outside to see the number of sacks emptied into the cart or waggon, and the moment your back is turned, the sack is changed for a less one, and so you are defrauded. And if you insist on its being carried out in the strike, or bushel, some of the soot is trodden down in the bottom of the bushel, and there remains—only a part is emptied into the waggon. One scarcely ever thinks of measuring soot, as it is generally taken to the field and sown forthwith; but on one occasion, strongly suspecting there was not the quantity stated, I took the trouble to have it measured, and found I was attempted to be robbed of exactly 66 2/3 per cent."

VINE GRAFTING (W. Sigburth).—We do not think it would be well to graft your vine now, at least, we never thus performed it. The general practice is to suffer the stock to be a little in advance of the season. Perhaps you may venture towards the middle of the month. You do not say whether the head of the stock is to be cut entirely away, or whether you are only adding a graft to the side of an existing shoot. Vines take so readily by grafting, that it is almost impossible to fail. To avoid bleeding, rub white lead on the wounds, and cover the junction part with moss, to be occasionally damped.

UNFERTILE WALL TREES (An Old Subscriber).—Half the fruit-trees in the kingdom are ruined by border-cropping, &c., in other words, annually destroying their surface-roots. We allow no digging or forking for seven feet next the wall in full grown trees. Deep roots produce late growth, late growth ripen badly, and badly ripened wood sets badly. It could not be otherwise with tender trees. You must not allow what is vulgarly termed blight. Any crop, if you must crop it, for which six inches of digging will suffice, you must make up for want of depth by extra manuring.

SOLUBLE PAINT (G. R.).—With such a dressing you may safely paint both walls and wood all over in the end of the month. You may double the amount of sulphur with benefit, and if the colour is too glaring, you may subdue it with soot; this is our practice. You may apply it to any tree about which a fear of insects exists.

HEATING PITS (William Bird).—We really cannot answer for your modified plan. These compromises sometimes have an awkward termination. It is our duty to point to principles, yours to carry them out. As to training Cucumbers and Melons, let us repeat they must enjoy plenty of light; the mode of training matters little, only do not let them grow at random. It will probably be necessary to give a paper some day on these minutiae. If William Bird was at our elbow, we would take him round the garden and point to matters at once, but really our columns are scarcely broad enough to follow that course which good-nature itself would point to.

POLAND AND HAMBURG FOWLS (A Poultry Fancier).—There is no doubt about the distinctness of these, but you do not enumerate all the sub-varieties. If, as you say, the taste for Shanghaes is ill-grounded, the mistake will soon be found out by the natural good-sense of our countrymen; but we differ with you entirely. When you have any facts to record we shall willingly publish them.

BOOKS (B. H.).—You had better wait for the new edition of Mackintosh; and instead of the other, buy *The Pine-apple*, one of the works published in the series called "The Gardener's Monthly Volume." It is to be had of Mr. Bohn.

POULTRY-HOUSE (Ross).—You will have seen the plan of Mr. Punchard's; others of the cheapest construction will be published in the forthcoming work on Poultry, and we shall borrow a plan from it. Galvanized iron net-work is the best, and cheapest in the end, of all the materials usable for Poultry enclosures. Three feet high for Shanghaes, and six feet high for other varieties is required.

POTTING SAND (J. B. P., Dublin).—The Kilving sand will answer excellently for potting purposes.

TEAZESCA PRUNING (Ibid).—This will want no pruning, unless forced to grow in heat. The stopping of a shoot, by pinching out its point, will be sufficient. When grown in an airy house, that will seldom be required when the plant is established, as it is truly a continuous bloomer, and will throw out side-shoots as it extends in height. When a plant becomes straggling, you may prune it back with safety, provided you do not cut back into wood above two years old; but after the operation, you must keep the plant closer and warmer than usual before it breaks, and then expose it to plenty of air by degrees. For *Eufasia*, *Westringia*, &c., see Mr. Fish's paper of to-day.

STRAWBERRY FORCING (Andréu) writes thus:—"I have at this time several strawberry plants (out-of-doors) in bloom, and just coming into bloom (Myatt's Prolific Hautbois); would it answer to take up some and pot them in 3's or 2's, and put them in a forcing-pit? There is not the slightest chance of doing any good with them. They are in bloom all over the country."

VINES, IN POTS, FROM EYES (An Amateur, Dublin).—Your seven questions involve such long answers that we must be excused for answering only one of them in each week; and we begin with vines in pots, for which you modestly ask a treatise, to include "all particulars," from the "striking of the cuttings to bearing." With good gardeners, this takes about two years or thirty months. Get plump eyes from well-ripened shoots in readiness by the end of next February, then have a gentle hot-bed ready with a steady bottom heat of 80°; take sixty-sized pots, and fill them with rich light compost of one half loam and the other half of leaf mould and a little sand; plant a single eye in each, plunge them in the bed, keep the soil a little moist, and do not let the air in the bed get hotter than 65° until you have the eyes in leaf.

BLACK SHANGHAES (E. Bateson).—We cannot thank you who has any for sale. Those who have must advertise them. The following letter, just received, however, may be of use to you:—"I must beg to differ from your correspondent 'T. A.' who states that 'there are no Black or pure White thoroughbred Shanghaes Fowls in England.' I am now in possession of both, bred from birds imported twelve months

since; and a friend of mine, residing in this neighbourhood, has a pair of pure white, thoroughbred Shanghaes. Should 'T. A.' persist in his opinion, I shall be happy to do all in my power to convince him of his error; and, doubtless, my neighbour would do the same.—W. LOWY, Ward End, Birmingham."

DISEASE IN PIGEONS.—J. T. says.—"I should be greatly obliged if you, or any of the correspondents in your paper, could inform me the cause, and cure (if any), of a lump or coag which comes in the throats of some pigeons, generally at from a week to three weeks old, and in most cases is fatal, by preventing them swallowing or breathing. During the last season I have had quite half my young ones die from the above disease. Has the water, which is hard and chalky about here, anything to do with it? But I have occasionally had them die when I kept them in London, of the same disorder; but then it could not be the water; and as some of my birds are very valuable it is a great loss." For information relative to *White Combs* in Shanghaes, see a case in another page of this number.

FALSEPLAY.—We have a letter sent to us for our correspondent who wrote to us under this signature, at page 213 of the present volume.

ERRATA.—At page 116, col. 3, line 20, for *end*, read *one*. Line 46, for *limited*, read *waited*. Line 79, read *Gellen*. Page 111, line 7, for *auspicious*, read *suspicious*.

CHARACTERISTICS OF THE SILVER-SPANGLED HAMBURGERS (A Consistent Subscriber).—The cock should have a full, but firm and erect comb, terminating in a point behind, large wattles, and a white earlobe; ground-colour clear white; the extremity of each feather of the body being tipped with black, hence their synonym, *Mopins*; wings regularly barred, as point now much insisted on; tail full, with but a small admixture of white in its sickle feathers; bill short; body neat and compact; legs clean, and in colour pale blue. The hen's markings should be even more distinct than those of the male bird, the outer edge of each of the eight feathers being delicately margined with a dark line instead of barred, and the tail tipped only with black. In both sexes the colours should be clear, and in no way blended, or run one into another. We did not observe the faults enumerated by our correspondent in the prize birds of this class at Birmingham, for an imperfect comb alone, such as he describes, would at once bar all chance of success; but the class there was not one of peculiar merit.—W.

GOLDEN-SPANGLED HAMBURGERS (Omega).—The feathers enclosed are those of well-coloured Golden-Spangled Hamburgs; their provincial appellation of "Bolton Bays" will, in this case, be readily understood from the brilliant ground-colour. The "Dull-black and ochrey-brown" alluded to would betoken a very inferior strain of this variety, which was well represented at the last Birmingham Show, and from the winners on which occasion fresh blood might be advantageously introduced. Though the birds may have been sold to you as "Copper Moon Pheasants," they are true Golden-Spangled Hamburgs.—W.

FECUNDATED EGGS (Argus).—We certainly should have no faith in any one's directions for deciding whether eggs are impregnated from their specific gravity. The test, therefore, of "putting them in a bowl of water, and rejecting such as do not sink to the bottom," we believe valueless. Our own opinion is, that in the fresh egg, whether impregnated or unimpregnated, no difference is found till after incubation has begun; then, when broken, the membrane of the fertilised egg is found opaque, the cicatricula, or punctum, well-marked, and the surrounding zone brilliant. Other points of difference might be mentioned, but they would require microscopic aid. The mark, or appearance, in the egg to which you allude, is probably its condition when placed between the eye and a strong light after it has undergone a week's incubation; the embryo in the fertilised egg will by that time have assumed a distinct form, easily discernible from the state of a clear egg.—W.

FURNISHING A CONSERVATIVE WALL (A Brighton Subscriber).—You have put up a conservative wall on the north side of your stove-house, and you wish to have some plants placed against it that will furnish your lady "with cut flowers plentifully at Christmas," and they are to be very useful, very beautiful, and very uncommon. It is no easy task to inform you of any plants that will do all this for you. *Camellias*, you say, will thrive in it; you know; and if so, what can you have better to cover your forty feet long wall. However, if you wish for variety, add one or two of the following:—*Azalea indica alba*, *Escallonia muricata*, *Daphne hybrida*, *Daphne indica rubra*, *Coronilla glauca*, *Chimonanthus fragrans* and *grandiflora*, *Deutzia gracilis*, an *Orange-tree*, and a sprinkling of *China* and *Perpetual Roses*. If you were to cover your wall with glass, you might extend the list greatly, as there are many plants now grown in greenhouses that would live and flower well under glass against a conservative wall; a list will be published shortly. There are some other shrubs that would live and flower against your wall, but as you wish for winter-flowering ones, the list here given will answer the purpose from December to April.

PLANTS FOR A WARD'S CASE (Ignoramus).—You have a Wardian case, 3 ft. 6 in. long, by 1 ft. 6 in. wide, and 1 ft. 6 in. high, with a box 6 in. deep for soil. You wish to know what sort of soil to put in this box, and what kind of plants will grow in the case. You would wish to have some flowering plants as well as *Ferns*. Now, we can assure you, from dear-bought experience, that no other plants excepting *Ferns* and *Lycopodiums* will live for any time in such a case. They will live and flower, if already in bud, for a few weeks, but then they inevitably damp off, even with plenty of air on favourable occasions. Be content with what we recommend, and you will succeed. *Ranunculus* would damp off in a fortnight. *Hypochaeris* might last a little longer; and *Cactus truncatus*, if provided with buds would expand them, but would never produce any more. The soil you should use is the siftings of heath mould or peat, with a small admixture of very turfy, fibrous loam, and a small portion of silver-sand mixed through the whole. It is advisable to have a thin layer of broken crocks spread over the bottom of the box for drainage.

OWNED: Printed by HARRY WOOLPDYSEN, Winchester High-street, in the Parish of Saint Mary Matford; and Published by WILLIAM SOMERVILLE DOW, at the Office, No. 5, Amen Corner, in the Parish of Christ Church, City of London.—January 6th, 1853.

THE COTTAGE GARDENER—ADVERTISEMENTS.

NEW TALE BY MRS. ELLIS.

The eminent Authoress of "Family Secrets," "The Women of England," &c., has undertaken to write a New Tale for THE FAMILY FRIEND, entitled, "THE MORMON'S MISTAKE." The Tale will be illustrated in the best style by ARMYL, and constitutes the First Number of the Third Volume of the New Series (No. 37), now ready.

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"Somewhat fastidious readers may, perhaps, imagine that a book of this kind must necessarily be dry and uninviting to all other parties than those for whose special benefit it is written. Such an assumption is very wide of the truth. The 'Dovecote' displays an amount of various reading and research, and an amplitude of illustration, of which we have no previous example in the catalogue of such publications."—*Midland Counties Herald*, July 22, 1852.

Second Notice.
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COUNTRY GENTLEMAN'S COMPANION.

CONDUCTED BY GEORGE W. JOHNSON, ESQ.

No. 221.]

THURSDAY, JANUARY 13, 1853.

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that I have done better by leaving the choice to
you than selecting for myself.”

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WEEKLY CALENDAR.

M D	W D	JANUARY 13-19, 1853.	WEATHER NEAR LONDON IN 1851.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock aft. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.						
13	Th	<i>Salpingus roboris</i> ; bark.	29.538—29.448	50—59	E.	24	3 a. 8	15 a. 4	48 49	4	9 7	13
14	F	<i>Salpingus rufrostris</i> bark.	29.739—29.701	51—60	S.W.	16	3	15	9 58	5	9 30	14
15	S	<i>Apion Ulicis</i> ; furze.	29.693—29.488	56—44	S.W.	26	4	15	11 7	6	9 50	15
16	Sun	SUNDAY AFTER EPIPHANY.	29.840—29.703	53—37	S.W.	67	1	20	morn.	7	10 11	16
17	M	<i>Monotoma juglandis</i> .	29.841—29.651	47—24	W.	—	0	21	0 18	8	10 31	17
18	Tu	<i>Rhagium vulgare</i> .	29.836—29.276	44—23	S.W.	—	—	21	1 28	9	10 50	18
19	W	<i>Notonecta furcata</i> ; ponds.	29.141—29.998	47—28	S.	—	—	24	2 30	10	11 8	19

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-six years, the average highest and lowest temperatures of these days are 41.7° and 31.2° respectively. The greatest heat, 67°, occurred on the 19th, in 1828; and the lowest cold, 4°, on the 14th in 1838. During the period .03 days were fine, and on 79 rain fell.

THE STIFF CEANOTH.

(Ceanothus rigidus.)



This is one of the genera included in the order of Rhamnads (*Rhamnaceæ*), which appear to be confined to particular countries; all the true Ceanoths are natives of North America and Mexico. *Phyllas* are found only at the Cape, and *Pomaderris*, with *Cryptandra*, in a wild state, are not met with out of New Holland. The genus was first named by Linnæus, and subsequently Rafinesque called it *Forrestia*, a name which obtained currency among authors. It belongs to *Pentandria Monogynia*, class and order of the Linnæan system. It is figured in the *Botanical Magazine*, t. 4661.

Ceanothus rigidus was discovered in 1848, by Mr. Hartweg, in open woods, near Monterey, in California, by whom seeds of it were sent to the London Horticultural Society, who distributed plants of it freely among the Fellows. It was originally discovered, however, by Nuttall, who named and described it in Torrey and Gray's *Flora of North America*, vol. i. page 208. It is an upright, stiff, branching evergreen bush, growing from four to six feet high; the young branches are downy; the leaves small and dark green, smooth and shining on the upper surface, and spiny-toothed on the edges; on the under side they are pale green, and

strongly notched. The flowers are produced in dense small clusters at the end of stiff, short spurs. They are deep purplish-violet, very rich when viewed closely, or under a bright sun, but not very conspicuous at a distance. In this country the plant flowers in the spring, and is perfectly hardy in the climate of London, and in the climate of Devonshire would equal in vigour the other North-west American *Ceanothus* as thus described by the Bishop of Exeter, when writing to Sir W. Hooker, in May of 1852. "The *Ceanothus divaricatus* is now in its highest beauty; the largest plant is eighteen feet high, eighteen feet wide, twelve feet thick, covered with thousands of the beautiful thyrsoid (bunch-of-grape-shaped) flowers, so that the leaves are scarcely visible. *C. rigidus* blossomed about six weeks ago; *C. dentatus* is now in full flower; *C. papillosus* is just coming into flower; *C. azureus* will not blossom until August."

B. J.

Propagation and Culture.—No plants can be more readily increased from cuttings of the small side-shoots than the "New Ceanothuses," as they are called, of which this is one. These cuttings will stand as much top and bottom-heat as *Fuchsia* cuttings; that is, ten or fifteen degrees more than is safe for a Pine-apple, or a Cucumber plant. They will also root freely in any degree lower than that, till you come to the common hand-glass on a shady border, or even without the aid of glasses, behind a north wall, if they are put in from August to October. I am not aware that this species has ripened seeds in this country yet. No soil can be too rich for this plant, nor too shallow, nor too dry at the bottom; I mean not too shallow within reason—say nine inches deep. When the soil happens to be deep, deeper than twenty inches, with a moist bottom, it cannot be too poor for any of the true *Ceanoths*, and here is the reason for both sides of the question. This species, as the name implies, is a stiff-growing plant, the greatest part of the side-branches being merely fruit-spurs, as Mr. Errington would say. Now, a very rich border, twenty inches or two feet deep, such as a good old-fashioned vine-border, would force this stitfish gentleman to give up its Californian habit, and come out more freely in all its parts; but then, on the other hand, this high feeding would be certain to cause the plant to continue its forced growth too late in the autumn, when the chances are, that a sharp winter would kill it in the north, and injure it more or less everywhere. As far as I know, this is the only species of the genus that could be improved in this country by a judicious course of high feeding with liquid-manure, early in the season, provided that the border was shallow, and the situation favourable. All the other species of *Ceanothuses* grow so freely in any good garden soil, that it would be injurious to them to enrich it artificially, and so prolong their growing season in the autumn. Since I began this article, it occurred to me that a review of the whole genus might be useful and interesting, and I will prepare my notes accordingly.

D. BEATON.

THE extraordinary high price now giving for the best varieties of Dessert *Pears* is rousing attention to their growth, and we have before us numerous inquiries asking whether they are more difficult of cultivation than the Apple? Whether they are less hardy? Whether

they are shy bearers than Apples? with other questions, all demonstrative that a movement is making, or intended, to their more extensive cultivation. This is as it should be; for there is no reason whatever against such an increase in their numbers. In fact, the reasons

are all in favour of such increase. We have already given lists of those superior varieties which are to be preferred for standards, and other lists will follow of those kinds which are to be selected for wall-culture. Let us add, that on walls they are a much more certain crop than either Peaches, Nectarines, or Apricots, whilst they fetch prices quite as remunerative. Instead of struggling against adverse circumstances, and wasting labour and years in the endeavour to steal a scanty crop now and then of those natives of warmer climes, in spite of our ungenial seasons, we advise all those who covet either a more certain, or a better compensating crop, to devote their walls to the best varieties of French Pears.

It is more than strange that neither here, nor in any other country than France and Belgium, has a careful culture and a firm pursuit of the improvement of this delicious fruit been attempted; for it is a fruit native of every district of Europe, and has been cultivated from a period very remote.

The Hebrews knew it only in its wild state (*Agas*), but Homer places it among the fruits of the garden of Alciraus:—

"The branch here bends beneath the weighty pear,
And verdant olives flourish round the year.
The balmy spirit of the western gale,
Eternal breathes on fruits untaught to fail:
Each dropping pear a following pear supplies,
On apples, apples, figs on figs arise:
The same mild season gives the blooms to blow,
The buds to harden, and the fruits to grow."

Beyond the fact of the ancient Greeks having this fruit in cultivation we know nothing; but when we descend a little lower in the order of time, we find among the early Romans not only a very accurate knowledge of its cultivation, but that they had many varieties, distinguished by names which told of their quality, their place of birth, or their first owners. Thus Cato, who lived half a century before the birth of our Saviour, enumerates, as the most excellent of Pears, the *Voleman*, *Anicianan*, and *Semontivan*; at the same time characterising the time when winter had quite departed, as being "when the Pear begins to blossom."

Columella, Pliny, and others, are still more copious in their lists of Pears; and some modern fruitists have endeavoured to identify these with varieties at present known to orchardists. Without expressing any assent to these identifications, yet we think they are not without interest; and we would not have the man for our friend who does not care to know that he is partaking of fruit descended from trees of which Pliny, Cato, Varro, Columella, and Virgil, may have enjoyed the produce.

To aid our readers in the enjoyment of this pleasant possibility, we will trace out some particulars which Dalecamp and others have suggested upon this subject.

Columella says: "We must be careful to plant our orchards with the most excellent and fruitful Pears. They are these:" *Crustumina*. This was so called from *Crustumina*, in *Hetruria*, where it was most cultivated. Pliny says it was of most grateful flavour; and Servius says it was small and partly red. Supposed to be our *Petit Blanquet*, or Little Blanket.

Regia, or Royal. Pliny says its stalk was so short that it grew close to the branch, was oblong in form and green in colour. Dalecamp considers it to be the *Carmaignole*.

Signina. So named from *Eignia*, in Italy. Pliny says it was by some, from its appearance, called *Testacea*, or Brick-coloured. Dalecamp thinks it is the Cat Pear (*Poire Chat*).

Superba. It is small, says Pliny, but it is the earliest. Hardouin and Dalecamp agree that it is our *Little Muscat*.

Ordeacea, or Barley Pear; because, says Pliny, it was ripe in barley harvest. It is thought to be our St. John's Pear, or *Amiré Joannet*.

Favoniana. Pliny says it was red, and a little larger than the *Superba*. Dalecamp and Hardouin think it is our *Great Muscat*.

Lateritana. Probably from its brick-red colour; is supposed to be the *Poire Prevost*, or Provost Pear.

Doiabelliana, was named after a Roman citizen, and distinguished for its excessively long stalk. Dalecamp thinks it is our *Musette d'automne* (Autumn Musette), or *Pastorale*.

Veneru, or Venus Pear. So called, says Pliny, from the beauty of its colours. Dalecamp says it is the *Poire Acciole*.

Onychina, the Onyx Pear, from its purple tints. Dalecamp thinks it is the *Cuisse Madame*, or *Jurgonelle*, of our gardens.

We might extend this catalogue twofold, but, after remarking that though the Romans paid such attention to the Pear, it is entirely neglected by the degenerate race now occupying the territory of the Seven Hills, we will next pass on to the consideration of what has been done to improve this fruit in more modern times.

No building could well be more suitable, in every respect, for a large poultry exhibition, than Bingley Hall, Birmingham; and if we now hazard the opinion that the arrangements, in some few points, might still be susceptible of improvement, it is only from the fact that occupying, as that show undoubtedly does, the post of honour, and being consequently the model for imitation, all should be as near perfection as may be.

Where light is, as there, admitted by skylight, a great loss of effect will ever be caused by having two tiers of pens one above another. This was evident at the last exhibition, where the Game fowls and Hamburgs, elevated aloft in the central avenues, had greatly the advantage over their more august neighbours below. True, there was no help for it, and the committee, with upwards of 1300 pens to provide for, made the most of the room allotted them; but in the smaller county exhibitions this may be kept profitably in mind; and, wherever it is practicable, single rows of pens will always be found to do most justice to the birds, be they of what race they may. In the double row it inevitably happens, where both are at all visible, that the first is lower, and the second higher, than they should be.

About two feet ten inches seems the level most to be desired for all purposes.

A petition for wider alleys between the lines of pens might be met by the same answer—Where was there room for it? But on other occasions, where the candidates do not muster in equal force, the argument that what was sufficient at Birmingham will be sufficient there also, might prevail, even though space was at hand for a clear passage of at least twelve feet. Feelingly do we give evidence that a large majority of the Birmingham spectators would cheerfully assent to such an alteration, could it possibly be so managed; but were it practicable to hold the poultry and cattle shows at different times, what luxury of space would be attainable! Every bird might then be disposed with full effect; and though we know not how our bovine and porcine friends would treat such a proposal, the poultry interest we are quite sure would not suffer. Some room, we think, might be gained by a reduction of the depth of pens; for supposing them, for fowls generally, to be three feet wide, two feet and a-half in depth would be amply sufficient for the threes and fours that are now exhibited, and save many a poke from the sticks and parasols of inquisitive beholders. All managers of future exhibitions will do well to follow the example here afforded, and secure the pens from any risk of cold draughts of wind, than which nothing can be more injurious. Ventilation from above is of course the most efficient precaution against anything of this kind.

Would not dry sawdust have been a better material for littering down the pens than the red ochrey sand that so besmeared the plumage of the white and light-coloured birds? And, in respect of food, might not a portion of *boiled* grain be found most useful, both as regards the digestive organs, which are likely to have their powers somewhat reduced during the *long* period of confinement, as also when we remember the very stimulating character of the diet on which, generally speaking, the fowls have been previously fed? Now, boiled grain is both very tempting and very wholesome, and would be greedily taken when the most seductive mixtures of barley and oatmeal failed to excite the appetite.

This leads us to an earnest appeal on behalf of that portion of the feathered race who are summoned together on these occasions, that the period of exhibition should, if possible, be abridged. We do not presume to lay down any exact regulation as to how long this, to them *durant vile*, should last; but we think that under no circumstances would it be necessary to exceed two days for exhibition, with two more for the labours of the judges, and the fowls' dismissal to their homes; thus four days in all would be quite long enough to detain them in a condition so contrary to their usual state; and we believe that we are not wrong in thinking that many owners of valuable birds are strongly of our opinion. The mere pecuniary question is another matter, which we are not competent to enter on; but, if report speaks truly, the Birmingham Society might possibly afford to set us another good example in this respect, as it has already done in so many others.

The impression produced on us by the continuous line of Hamburgs, Polands, Dorkings, and the varieties of Shanghaes, thirty or more pens of birds of the same form and plumage succeeding each other—though, of course, unavoidable—led us to speculating as to what could, probably, constitute the most perfect and, at the same time, most “*eyesome*” (to use a Cornishism) representation of the different varieties of fowl. Now, some six pens or so in each class would, I imagine, save the eye from being thus wearied with what, however excellent, proves at last monotonous, and would also combine, when carefully selected, every point of excellence that the several breeds could boast of. With the stimulus that poultry-keeping has lately, and still continues to receive, we cannot but think that such a scheme may be within the verge of *possibility*, and that, too, at no great distance of time, though, of course, on a perfectly different footing to any of our present meetings.

To facilitate intercommunication, we would also suggest for adoption at the Birmingham, and all other large public exhibitions, that an “Address Book” should be kept at the secretary's office, in which any visitor might enter his name and place of sojourn. We know many men from distant parts of England who would have rejoiced to interchange civilities at Birmingham, if they had known of each other's presence and whereabouts.

But, after all, what we have been talking about, a little more space, a little more alteration in the pens, some sawdust and boiled grain, form the catalogue of all the minor points we can manage to find fault with at Birmingham; and the only pretext for dwelling so long on these comparatively trivial matters is, as we before observed, the certainty that the Midland Counties Poultry Meeting has been, and, as we hope, will long be, regarded as a safe model and authority for the guidance of its juniors; and thus even such minutiae as we have alluded to become deserving of our careful consideration. But there are such individuals as judges, and there are, too, such facts as their decisions—awful topics—only to be approached with awe and trembling; nevertheless, having got so far, to retreat is out of the question, and, in plain terms, we must have it out.

Imprimis—let us remember, that to pronounce upon 1300 pens at Birmingham, without adding the pigeons, who were separately provided for, four gentlemen were occupied for thirteen hours. Now, without saying another word, the mere bodily fatigue and anxiety to arrive at a correct decision that must have inevitably accompanied such continued labour, entitles them to our best thanks, and should be amply sufficient to account for any little difference, should such be found to exist, between their awards and our own pre-conceived, and often rather obstinate, opinions of what may seem most in consonance with our own ideas.

We are merely speaking of what took place at Birmingham, as of what *may*, and does take place, in a greater or less degree, at every Poultry Show. Let us grant the decisions to be just and fair; but we ask, is not the labour excessive; and is it possible that those classes that come before them at the *thirteenth*, not the

eleventh, hour, can profit by their knowledge and experience in the same degree as those that occupied the earlier morning?

Many are of opinion, and we are of the number, that the decisions of a single judge have several points to recommend them. He may be selected with a special view to the classes to be entrusted to his judgment; he feels that no other shoulders than his own will share the responsibility, so that there is the greatest inducement carefully to estimate every point at its proper rate. Now, supposing these four gentlemen at Birmingham had each had their 325 pens, or, if such sub-division be objected to, each two had had 650, their awards would surely have been completed at a much earlier hour, and a double benefit of a saving of fatigue to themselves, and some limitation of the poultry's occupancy of their pens might thus have been obtained.

It has been our unpleasant duty to condemn what we consider errors in the appointments of judges, as well as errors in their decisions; and we have been told that our condemnation has not been sufficiently severe. We differ totally in that opinion, and for many reasons. Let it suffice for us to say, that we have a conviction which nothing can loosen, that if that very unenviable office of judge at these exhibitions is to be filled by competent persons, public confidence must be accorded to them, and their decisions once announced, individual criticism should be very tender in dealing with the awards, even when a mere difference of opinion as to relative merits may be the point in question. But when, on the other hand, strong facts and clear evidence would warrant the probability of partiality, or other injustice, then there is but one course to be taken by the dissentient, by an appeal to the committee, or managers, with the production of the evidence on which the charge is made. This is no less due to the calumniated party, than to the Society, its exhibitors, and the public at large.

We are not here speaking of the Midland Counties Exhibition *particularly*, but of all *generally*; not retrospectively, but as intimating the course that justice would point out when such questions might unfortunately arise. Few will hesitate to admit, that, whatever its distinction, the judicial office on such occasions has a larger share of responsibility attached to it than is lightly to be undertaken. Any steps, therefore, that might serve to reduce that responsibility would be in the right direction. Now, we have long thought that through the means and concurrence of the committees and managers of the different Poultry Societies, and the assistance of the large breeders and exhibitors which would be readily rendered, some standard might be gradually arrived at, according to which the points of excellence, properties, and characteristics of every member of the poultry-yard might be at length defined. We may be thought, perhaps, over-speculative in advancing such an opinion; but, although positive unanimity could not be, at first, hoped for, yet we strongly believe that there would be far less difficulty in carrying out such a scheme than a first thought on the subject may suggest.

The great difference of opinion as to rival claimants for the honours of the prize list will usually be found to arise, not from the question as to what should be regarded as points of excellence, but from that of the relative proportion in which each may be regarded as possessing these same points. At present, however, great confusion prevails; and constantly is it asserted, that awards have resulted from peculiar notions of merit, and rules for decision. The part of a judge, were he able then to refer to such a standard as we have suggested, and say "Here is my authority for requiring such and such points in a bird; and my judgment, therefore, is only exercised in pronouncing which competitor possesses these points in the highest degree,"—the office would be less reluctantly assumed, and its decisions more generally satisfactory than they now appear.

Many who are fully alive to the great benefit that would result to all who are any way concerned in these pursuits from the institution of such a standard of excellence, yet dread the difficulty that may exist in the way of its being practically carried into effect; but on that plea we might just as well make up our minds to the perpetuation of the Income Tax, or any other abomination, if no attempt is to be made towards improvement, because our path may not be free from all obstructions, and the horizon may, at times, be clouded over.

Look at what has been done within the last few years in this branch of domestic economy, and who shall say that there is not good encouragement for a still further advance, both as regards the improvement of our stock, and the more systematic arrangement of those details to which we now look for the further development of excellence, no less with respect to profit than appearance.

Many, we believe, and those the most competent, would lend their judgment to this work, difficult as the scheme may at first be thought, and THE COTTAGE GARDENER would ever be at hand as a zealous ally.

W.

COVENT GARDEN.

If a butcher, or baker, is found cheating the public by using false weights, he is taken before a magistrate, and fined; he loses his reputation for honesty; and his business suffers. In almost every department of trade the law has, in this respect, made provision for the protection of the purchaser. It matters not by what name the measure may be called, it is requisite it should contain what it is professed to supply. A *quarter* of wheat is eight bushels; a *last* of rape-seed is ten quarters; and whoever makes a purchase at Mark-Lane of a *quarter* of wheat, or a *last* of rape-seed, expects and insists upon receiving his eight bushels or his ten quarters. So is it in all commercial transactions with which we are acquainted. But we are sorry to find that Covent Garden Market is either beyond the reach, or is placed in defiance of all law. If we buy a bushel of apples, we of course expect to receive a bushel, even although they may be measured in a wicker

basket. An unconditional bushel means imperial measure of four pecks; but such does not seem to be the case in Covent Garden, as we have in several cases lately been obliged to learn. We know there are some of the measures made use of in the vegetable and fruit markets—such as the *pottle* and the *punnet*—which have a vague and indefinite signification; and we should have been induced to think the same of the bushel also, had we not discovered a system of deception and roguery which has become too general, while at the same time purporting to supply imperial measure. In every instance which has come under our notice we have found the bushel basket to be filled about one-fourth of its depth from the bottom with straw, and the quantity of apples which are obtained is barely three pecks. Now this is a state of things which ought not to be permitted, and one which calls loudly for the interference of the proper authorities. Why should the public be robbed of their fruit with impunity, any more than of their sugar, or tea, or beef, or bread? It would be well if some one who has time and ability would give heed to this matter. It requires only to be inquired into, and the proper machinery to be set in motion, to have the nefarious system abolished.

The continuance of the present unreasonable and unfavourable state of the weather is operating very much on the trade of the markets, and the consequence is, the sales of every description of produce has been heavy. The supply of fruit continues good. Apples do not realise such high prices as during the last few weeks; good-looking varieties being to be had at from 4s. 6d. to 7s. 6d., and dessert from 6s. to 8s. per bushel. The sorts which have been most plentiful are the old *Royal Jassett*, which is an established favourite; the *Winter Greening*, or, as it has been called of late years, the *French Crab*, is also an old and excellent keeping apple for kitchen use, as it continues in use as long as April and May, and, in some instances, when well kept, even as late as June and July. The *Hanwell Souring*, a valuable sauce apple, is also pretty plentiful. There are also several parcels of *Alfriston*, *Blenheim Pippin*, *Golden Winter Pearmain*, and a few *Beauty of Kent*. We do not recollect ever seeing so few *Nonpareils* as this season; they are understood to be very scarce. An excellent dessert apple, which is largely grown in Surrey, called the *Cockle Pippin*, has appeared during the last week or two pretty plentifully, and meets with a ready sale. *Newtown Pippins* and *Lady Apples* are plentiful. In PEARS, we have nothing new; and of what there is, the prices are such as to keep the supply equal to the consumption. The sorts are still, *Nelis d'Hiver*, *Beurre de Rance*, *Passe Colmar*, *Chamoncel*, *Easter Beurre*, *Ne plus Meuris*, and a very few *Dumasse d'Angoulême*. GRAPES are scarce, and obtain great prices. *Black Hamburgs* make from 5s. to 7s. 6d. per lb.; *Muscat of Alexandria*, 10s. 6d. to 12s. 6d. per lb.

VEGETABLES continue in abundance, the prices being the same as quoted in our last report. Forced *Sea-kale* and *Rhubarb* are more abundant, and *Asparagus* has, during the past week, been pretty plentiful, but very

small and weak. New *Potatoes* are being offered at one shilling for a small basket, containing about a pint-and-a-half, or little more. We also observed a few forced *Mushrooms*.

CUT FLOWERS and PLANTS in POTS are in great profusion. The former are of a more choiced description than we have been accustomed to hitherto, being all the production of the greenhouse, stove, or forcing-house. They consist of *Camellias*; *Azalea indica alba*, *Danielsiana*, and *Lateritea*; *Oytis racemosus*; garlands of *Passiflora Kermsiana*; spikes of *Euphorbia jacquiniiflora*; heads of *Poinsettia pulcherrima*; and bunches of *Lilac*, *Lily of the Valley*, *Primulas*, *China Roses*, *Geraniums*, *Violets*, and *Orange Flowers*. H.

The following is a list of the *Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list, and giving the address of the Secretaries.

DONCASTER, January 21st. (Sec. H. Moore, Esq.)

GREAT METROPOLITAN, January 11th, 12th, 13th, and 14th. (Sec. W. Houghton.)

REIGATE, February 1st and 2nd. (Sec. J. Richardson, Esq.)

TORQUAY, January 14th and 15th. (Secs. A. Paul, and J. C. Stack.)

STRAWBERRY FORCING.

THERE can be little doubt that with the extension of glazed structures (consequent on their cheapness as compared with former days) the forcing of the Strawberry will obtain an increase of patronage; and, if we may judge by the character of the inquiries made concerning them, they are as little understood as any of our forced fruits. We lately received a query from a subscriber to THE COTTAGE GARDENER throwing some light on what we mean. The writer, it appears, wanted ripe strawberries in February, and had purchased some plants for forcing of some gardener, or tradesman; and these, it appears, were simply runners pulled from the heels, and stuck into pots, when they immediately assumed the dignified title of "forcing strawberries;" and doubtless the increase in their price corresponded with the dignity of their improved position. Now, we are afraid to say what we think of the tradesman, if such he be, who could be guilty of such a transaction, provided that the unwary purchaser stated his objects properly.

Let it be understood, then, by all those who aspire at proficiency in this proceeding, that no success can be expected from strawberry plants unless they have been duly prepared for the purpose; and we may here briefly state in what that preparation consists. The first object is to obtain early and stout runners; but, whether stout or not, they must be early; and to this end it is good practice to keep a row purposely to breed from. We have known this done many years since, and, indeed, have ourselves practised it; and care must be taken to make a bed on each side the row, in March, for the young runners to nestle and root in. This was done by breaking the surface up, and applying a surface-dressing of rich old manurial matter—that from an old hotbed of the previous year, composed originally of dung and leaves, is excellent. This, chopped well, and scattered three inches thick for a yard on each side the row, will speedily produce strong runners. Care should be taken, when the strings which produce the runners first ad-

vance, to train them carefully, so as to cause them to produce the runners at pretty equal distances. By the early part of June the runners should be nicely rooted, and, to facilitate this, frequent waterings must be had recourse to previously. And here we may observe, that some prefer to pot them at once, and some to grow them on in a nursery. Our own opinion is, that for *very early* work the immediate potting is best; but for heavy succession crops the nursery culture is to be preferred. If potted, they may as well be put in the full-sized pots at once, which is generally the seven-inch pot, one plant in a pot, although some have two or three. Now, it is of much importance to use a proper soil for them, and, as usual with us gardeners, loam is the first thing thought of. We have known people to use a light soil, full of old manurial matters, with the idea of getting much finer fruit; but this is not safe practice. In houses, or pits, where there is a very regular amount of atmospheric moisture, this may answer; but such a soil is too capricious for ordinary cases, and thus we gardeners so frequently vote for loam, which to some seems inexplicable.

A good sound loam, rather inclined to adhesiveness, is the chief material then, for such parts with its moisture in a steady way; and Strawberries, especially after they come in bloom, may not be quite dry for an hour. However, a compost of three-parts of this loam, and one-part good rotten manure, thoroughly mixed, fairly may be recommended. Some use soot in the compost, or in the bottom of the pots: this we never proved. We may now add, that after potting they must be regularly attended to as to watering, and all runners produced by them assiduously cut away, but never one leaf plucked. They should be plunged above the ground level, in a thoroughly open situation, and once or twice during the summer the pots, turned a little, to check their tendency to root through the bottoms of the pots. Liquid-manure may be frequently applied whilst they are in active growth, clear and rather weak.

And now as to those planted out. A perfectly open situation must be chosen, and the ground being in good heart, or manured, they may be planted out at from nine to twelve inches apart: we should prefer a soil shallow, but rich. Some of the best crowns we ever knew were from a walk converted into a temporary bed by covering it with six or eight inches of rich soil. These grew rapidly until their roots came in contact with the hard bottom, when they became somewhat stationary, and the consequence was, firm, plump, and well-ripened buds, which produced very fine trusses of flowers under the forcing process.* Thus it may be seen that the object should be to produce a *very early* and luxuriant plant, and so situated as to discontinue active growth about the beginning of September.

Our readers must know that, in these respects, the Strawberry is amenable to the same influences as the Peach, the Vine, &c.; a well-organised bud of the previous year being alike necessary to the production of good fruit.

We must now advert to the forcing process. And, first, what conditions does the Strawberry like, and what dislike? Having, as before observed, good, strong, and well-ripened crowns or buds, let their first stages in forcing be taken in a very gradual way. Better let them be started—if we may apply such a caustic term to a mild process—in a frame that has scarcely any pretensions to heat. Now here, in the mind of the ingenious reader, may arise a question such as this—Does the Strawberry, in its native character, really require a decided rest, or does it not? Now, it appears to us, that much is contained in such a question. It is of no use saying that everybody knows the Strawberry

sinks into a sort of quiescent state everywinter. What we want to know is, whether a decided rest is a physical condition of the plant's well-being, as to a perpetuation of the species. The Alpines—a distinct section of the strawberry family—studied alone, would at once decide an inexperienced student to conclude that for the high organization of the incipient blossom-bud a comparative rest, &c., were unimportant. The Alpines, however, may be termed annuals, and perfectly distinct in habit. Our opinion, however, is, from a consideration of the facts, that our ordinary Strawberries *do not* require a marked rest, at least, not in the same sense as we apply it to our ordinary deciduous trees; and our reason for tracing out this part of the subject is to point to the fact, that those who have cool frames or pits to spare, may doubtless plunge them in such structures in autumn—say by the end of September—and, by coverings never suffer the temperature of the interior to attain the freezing point.

Now, it must be confessed, that these opinions may be considered slightly speculative for the present, but we should by no means object to put them in practice. We think, that to grow them extensively for market, brick pits would be the best economy; and the following is about the plan we should adopt. Pits about six feet wide, to hold six plants in a row, at about a foot apart; three rows reached from the front, and three from back. These pits to be about three feet above the ground level at back, and about one foot at front. To have a permanent bottom-heat provided, as in Hamilton's pine-system: a heat capable of modification, to meet varied circumstances, but having the capacity to reach 80° in the soil if needed, and a separate pipe, from a separate boiler, to warm the air of the pit at times, if required. Here we would at once plant out the well-ripened crowns, at about a foot apart, and as soon they were ripe, hurry them into market, pull up the plants, and instantly plant another lot, which might be in a somewhat advanced state, from other structures. By such means, we should hope to fruit nearly half-a-dozen batches of plants before the middle of May; and a man, with an acre of ground thus occupied in parallel lines, would furnish all our first-rate markets abundantly. But the business of such pits would not end here; they would produce thousands of Melons and Cucumbers after the Strawberries, until the following November. Such pits should have some night coverings; and if we had the management, we would keep whole lines of strong young plants in a nursery specially for the production of runners; every blossom should be plucked from them, and everything done which could add earliness and strength of constitution to the young runner.

These hints are for those whom they concern; we must alight from our hobby, and talk to small gardeners. "What condition does the Strawberry like, and what dislike?" was the digressive point. They like to be forced very gently; to be very close to the glass, especially a roof; to be carefully attended with water, and an atmosphere permanently charged with moisture. Who has not observed their beautiful exuberance during the heavy dews of a fine May,—every leaf laden with the glittering spangles? What they dislike is, of course, nearly the converse of all this; they dread a high night temperature; and, indeed, a high temperature of any kind; they never seem quipo at home much beyond 60°, and, indeed, we would make 65° our maximum in early forcing, even with sunshine, sinking to 50° at night; they dislike being dry at root after the truss begins to rise; and they abhor insect enemies under whatever guise. If they are neglected in regard of either air-moisture or root-moisture, and high temperatures are sustained, the red spider speedily finds them out.

And now we must finish these somewhat unconnected observations with advising our beginners in this way to

* The best plants we ever knew were raised in flower succession. The shallowness acted on them like the hard walk.—Ed. G. G.

mind the principles laid down. It matters not what their structures are called—pits, frames, greenhouses, what you will—the Strawberry cares nothing about structures; it is on those elementary conditions of light, atmospheric moisture, and the warmth they most affect, that success depends. Let it be remembered, that if the plants are not strong and ripe in the crown, the forcer must suffer his ardour to decrease in a like ratio; better be less ambitious—be content with ripe Strawberries in the end of March, instead of February.

R. ERRINGTON.

THE GENUS CEANOTHUS.

For the last two or three years I have had this family in my eye as fit subjects for the experimental garden of the cross-breeder; and now that I have been asked to write on the propagation and culture of one of the species (*C. rigidus*), it seems as if the opportunity had rather been thrown in my way, than that I went off of the path in quest of it; at all events, a tale about good subjects is never much out of season.

For many years the only *Ceanothus* known in our gardens was *CEANOTHUS AZUREUS*, still one of the best of the race where the climate suits it. I never saw but two plants of it managed so as to make the best of it in our climate, and one of them was the very handsomest plant in England at the time. I saw it in the most luxuriant growth, and clothed all over with its bright blue flowers, in long (much longer than usual) racemes from all the points of the shoots, and also from all the divisions (axillary) on the upper parts of all the young growth. I am not aware of a single hardy shrub in the country that is capable of so much improvement as *Ceanothus azureus*, and by treating it a few years at first in the way which I shall explain presently, it would stand our ordinary winters against a wall anywhere in which the Peach and Nectarine ripen.

It is a native of temperate regions in Mexico—not from the Cape, as is asserted in some books; and it is less hardy than any other of the species in cultivation. In the climate of London it is seldom much hurt by frost, when trained against a wall; and it flowers from August until stopped by frost. The flowers are borne by the young wood made the same season, like the grape vine; and, what is very singular, this habit is seldom made the most of, less so, indeed, than in any other plant. It is the custom, in most places, to give it protection in winter, but the young wood seldom escapes from injury, more or less; and the plant is not pruned until all danger from frost is over in the spring, when more of the young wood that has escaped the frost is nailed, or trained in, than is at all necessary; and the usual result is, that the flowers are not nearly so numerous nor so fine as they would be under a very different treatment.

Among all the plants that we train against walls, for their flowers, there is only one more which requires the same treatment as this, and that is the *Rosa microphylla*, or small-leaved Rose, from China. When either of them is first planted against a wall it ought to be headed down to near the surface of the ground, in October, for the first three years; at least, in order to get a sufficient number of strong healthy shoots from the bottom to form the skeleton of the future plant; these main shoots ought to be then trained in the fan-shape, like a peach-tree, with intervals between them as wide as are allowed to the main branches of a strong-growing pear tree, or say, not less than a foot from branch to branch. The same kind of pruning as they give to pear trees, until they fill up their allotted space, is the right way for this; that is, to cut back the young tops of the leaders to one-half or two-thirds of their length,

when duplicate leaders are wanted, and as the tree, or at least the young wood, is rather tender, this pruning ought to be done about the end of October, in order to get rid of as much young wood as possible, and so leave very little of it for the frost to play on.

Now, suppose a full-grown *Ceanothus* thus treated, it ought to look as much as possible, at this season, like one of those root-pruned pear trees about which Mr. Errington has given so many valuable directions; there are the spurs all the way up, on every main branch or leader, just as on the pear tree. But now, or from this time, the annual pruning of these spurs must go on exactly contrary to each other. The young wood on the spurs of this *Ceanothus*, and on the *Rosa microphylla*, must be cut as close as the knife can reach it, and that in October every year, and then the frost will have little chance to kill, even in the hardest winter. Next season, a whole thicket of young breast-wood will grow out from the close spurs; the more the better; but not a twig of it should be touched the whole season. Every year's growth ought to stand out from the wall, as wild as in nature, and as free. Then, and not till then, are the Blue *Ceanoth*, and the Small-leaved Rose, to be seen in their perfection of bloom, and the pruning in October will be more like cutting a bed of willows, or a field of corn, than anything else that I can compare it to. I have seen all this done for ten years in succession, and I am sure it is in accordance with the soundest principles in gardening.

I have a new scheme for growing this beautiful plant, of the success of which I am as certain as if I had seen it in practice for twice ten years; and with all the earnestness of a young convert, I recommend its immediate adoption. Any one having a couple of yards of garden ground may test the experiment. It is simply to manage it in all respects as you would a plant, a bed, or a row of the *Fuchsia gracilis*. First of all, make the bed as good as any bed was ever made; let one-half of it be of the nicest yellow or nut-brown loam that is to be had for love or money, quite fresh from the bank, or meadow, if possible, and with all the rough grass, roots and all, chopped up with it, the other half I would have of best turfy peat and half-rotten leaf mould, in such proportions as the compost-yard may point to: I am not particular to a shade, provided the loam, peat, and leaf mould, are the best of their respective kinds. Let this bed be two feet deep, and three or four inches above the general level of the surrounding grounds, and let the bottom be dry, or all will be lost. A border in front of a south wall would be a favourable situation for the first trial; open a trench a yard wide, and two feet deep, and fill it with the compost; then, about the end of April, plant a row up the middle, placing the plants two feet apart, and if they are in pots, shake off all the soil from the roots, and spread them out evenly, and so that the neck of the plant is a little deeper in the border than it was in the pot; then cut the plants to within six inches of the ground, and let them not want for water all that season. In October, cut all the young wood back to within an inch or so of the bottom, and put a covering of half-rotten dung all over the trench for the winter, and next year you may expect flowers in August, at any rate. Continue the same process year after year, and there cannot be a question about the thing answering in almost any part of the kingdom. The very same kind of treatment would do for all the *Daturas*, with a more safe covering in winter. The Coral tree (*Erythrina crista-galli*) would answer perfectly in a similar manner; but whether or not the rest of the *Ceanoths*, or any of them, would answer equally well, or at all, is more than I can affirm.

CEANOTHUS PALIDUS, *alias* *INTERMEDIUS*.—This is an English seedling obtained from *C. azureus*, by Mr. Masters, of Canterbury, and, as it is said, by crossing it

with the pollen of *C. Americanus*. I have often examined this plant in flower, and were it not for the well-known respectability of our authority for the cross, I should be very much inclined to doubt the plant being a cross at all, but only a natural sport; be that as it may, all that I have said about *Azureus* will apply equally to this plant, excepting the colour of the flowers, which is paler, and not nearly so rich; but where are we to look for the exact tint of the flowers of *Azureus*, when the plant is growing under favourable conditions?

CEANOTHUS AMERICANUS.—This plant is called the New Jersey Tea, in America, where they used the dried leaves as a substitute for Chinese tea during the war of independence. This is a dwarf bush, bearing white flowers from June to August, and casting its leaves in the autumn. It is rather a pretty shrub, but not to be compared with the above, nor with the Californian species, excepting *Cuneatus*, which is also a white-flowering one, and still less handsomer than *Americanus*. Any good garden soil, on a dry bottom, will grow *Americanus*, which ripens seeds in the neighbourhood of London in favourable seasons.

Amateurs, who do not understand the right kind of cuttings, or the exact time when they are ready for use, find a great difficulty in striking cuttings of either of the above; and the best advice for them, is to get them from layers made at the end of spring: these seldom fail. It is difficult to convince amateurs that layers made of hard-wooded plants should have the slit, or tongue, made on the upper side of the shoot, because they see that it is made on the under-side of the clove and carnation, and other soft, pliable shoots.

The following is the way to make layers of hard-wooded plants—Stoop down opposite the bush, and take a shoot of the last growth in your left hand, the point of the shoot facing you; then at four or five inches from the point where there is a joint on the upper side, slip in your knife a little below the joint, draw the knife to you and through the centre of the joint, and on an inch or so towards yourself; now bend the top of the shoot gently away to the left, and the tongue or cut part will go to the right, and when the cut end is clear off the shoot it is ready for laying two inches deep in the ground; place a pinch of sand just under the cut, and fasten it down with a hooked peg; then cover and press the soil gently all round, particularly to the side of the layer next yourself, so as to keep the end well up. All this time, and until the while is finished, you must not let the layer out of your hold for an instant; for if you do, snap it goes in a moment, and the off-end of it will give your eye such a scratch as you will remember till the next new moon, if worse luck does not finish the layering for that week. *Ceanothus Pitcheri*, *herbaceous*, *perennis*, *intermedius*, and *ovatus*, are all secondary names for *Americanus*, or slight variations of it, from seeds, which are not worth the trouble of keeping separate.

CEANOTHUS DIVARICATUS (*thyrsiflorus*?).—This is the first of the Californian species that found its way to this country in a living state. It is from near Monterey, where it grows to the size of a small tree, and flowers there from May to November. It is perfectly hardy in the climate of London, and will grow in any good garden soil. Its way of close growth, and shining, dark green leaves, and its numerous bright blue flowers, render it altogether one of the most handsome evergreens we have. It may be propagated all the year round from cuttings of the young wood, which root as freely as those of *Verbena*; and it grows rapidly in good soil, so much so, that it is eminently fitted for making one of those standard evergreens which are so much admired in geometric lines or gardens. With a clear stem, six or seven feet high, and a large round, head kept regular, we have nothing that could come near to

it in beauty. The small-leaved *Phillyrea*, as a standard, is our nearest plant to match it, or it might be allowed to spread into an open, loose-headed standard, or merely be allowed to form itself into a large bush. Whichever way it is grown, it requires five or six years good growth before it will flower much.

CEANOTHUS PAPILLOUS.—This is another very handsome, large, evergreen bush, from the Mountains of Santa Cruz, in California, where Hartweg found it growing to the height of ten feet. It has small, blunt, dark green leaves, which are downy on the underside. The flowers are as bright a blue as those of *Azureus*, with a purple tinge. This plant is also readily increased from cuttings. Having only been introduced in 1848, we are not yet sure how much cold it will endure, or how far north it will flower with freedom. In the south of England it comes into flower about Midsummer, and holds on a long time.

CEANOTHUS DENTATUS.—This is comparatively a dwarf species in its native country, near Monterey, in California. It is of less stature than *rigidus*, on the same ground, not rising above a yard high, where *rigidus* grows to four or five feet. This, also, was sent over by Hartweg to the Horticultural Society in 1848. All the plants from Monterey are hardy enough here, as far as our experience of them goes. In the south of England this bush flowers beautifully in May; the blossom is deep blue, in round heads, and very handsome. It comes from cuttings, like all the rest of the Californian species, very freely.

CEANOTHUS VELUTINUS (Velvety-leaved).—The velvet is on the under side of the leaves; the upper side shines as if varnished. This is a white-flowering species, and handsomer than *cuneatus*, and the varieties of *Americanus*, all which are white-flowering ones. It was introduced by the Horticultural Society from the sources of the Oregon, and is quite hardy, growing to a large-sized bush from five to ten feet high, and is easily increased. For a small garden this is the only white *Ceanothus* I would recommend. *C. Collianus*, another white one, but a dwarf plant, is very nearly related to *velutinus*; and *C. cuneatus*, one of the new ones, is white, and really not worth growing.

CEANOTHUS VERRUCOSUS (Warted on the Stems).—This is also one of Hartweg's new ones, and one of the very best of them, which will be a match for *divaricatus* soon; the habit is even stronger than in *divaricatus*. It would also make a handsome standard if it were trained so, but the stiff way of growth will hardly admit of being formed into such a regular shape as *divaricatus*. The flowers are light blue, and are produced in immense quantities from all the little side-shoots, forming great balls, or rather corymba, along the whole length of the main branches. This is the most suitable of all the blue ones for the north of Scotland: strong, stiff, regardless of cold, and even soil, and flowering in the height of summer. It was first called *integerimus*.

D. BEATON.

WINTER-BLOOMING, HARDY, GREENHOUSE PLANTS.

HABROTHAMNUS ELEGANS.—I think I first saw this plant growing against a pillar in the conservatory at the Regent's Park. Though it was then in early summer it was a beautiful object, with its large bunches of carmine tubular flowers depending from the points and sides of the young shoots. Many a visitor joined me in gazing at it, and from that day to this there have been repeated inquiries as to its culture. All the family introduced are natives of Mexico; belong to the Nightshade order; and in the shape of the flowers, and the mode of growth, resemble their near neighbours

the *Cestruis*, some of which, such as *C. aurantiacum*, though usually grown in a stove, yet, under proper treatment, would make a nice companion for our present favourite in a moderately warm conservatory. The name of the genus is appropriate, signifying "gay shrub;" and so far as the present species is concerned it may well be termed "elegant." First impressions are queer things to deal with, though we should admit only a tenth of what the ladies say about them. Their general influence is to stereotype an idea; and even should the opinions formed be based on nonentities, or warped by prejudice, it requires accumulated reasons and proofs to dissipate the first-formed notions. This is so far my case at present. No sooner is this plant mentioned, than, without the *præsto* of the wizard, the cap of Fortunatus, or the passes of the mesmerist, by some means or other, I feel myself straining my mental vision on the identical column in the conservatory of the Botanic Gardens. It is true, the plant grows very well in a pot, and, however grown, it is an interesting object; but were I asked how to produce the finest effect at the least possible amount of labour, I should decidedly say, turn the plant out into a border when one yard in height, and against a pillar, where it could have air and light all round. Sandy loam, and plenty of water, with proper drainage, will grow it well; but it will be advisable to give it a little peat when first turned out. Everything must be done at first to encourage growth; but in the second season, the stronger shoots should be shortened to produce plenty of weaker ones, and which will be ripened before winter. After that, little pruning, besides pinching a strong shoot, will be required. The shoots, except the leading ones, will soon acquire a pendulous position; and these, if well-ripened, will have large bunches of flowers at their points first; and as these are cut off others will take their place farther back on the shoot; and this continuous nipping-off the wood with the flowers will be the most of the pruning required. By this treatment, a plant has never been without bloom for a twelvemonth; but during the whole of the winter it is plentifully supplied. Thus managed, few things will beat it, or look more interesting in a greenhouse. It is also useful for cut flowers, where people can be satisfied with a small piece of the plant to support them. Our bouquet-makers, who wire or gum each separate flower, would say nothing at all about the shortness of the handle. For this purpose, it is something like the Scotch kale in the kitchen-garden—a regular "cut and come again," as, without the removing of the terminal bunch of flowers, many of the incipient bunches at the axils of the leaves farther back will not have stimulus enough to cause them to expand.

Many, however, who have not a pillar to spare, might wish to grow it in a pot, after what some may consider this too flaming a recommendation. I will just glance, therefore, at its general management. *Propagation*.—Firm, short side-shoots, inserted in sandy soil, under a bell-glass, and in a little bottom-heat, strike freely. If you inserted the cuttings this or the following month, potted them directly they were rooted, kept them close in a hotbed at first, and more open afterwards, shifted as fast as they required it, and hardened off in the autumn, you might have small blooming plants the first winter. Some orderly folk would object to giving such hardy plants such hotbed treatment; and, though it is by no means necessary, yet most of these largish-leaved American plants enjoy such treatment amazingly, and, if properly exposed and hardened off in autumn, will bloom none the worse in consequence. If you neither strike early, nor give more encouragement than a cold frame in summer, you must not expect the plant to bloom until the second winter, under even good general treatment.

Supposing, then, that you have kept the plant in a cold pit or a greenhouse in winter, it should be examined by April, and placed either in the greenhouse or pit, so as to encourage growth by closeness and warmth; the size of the plant will determine the shifts to be given. You will not do much good with a pot less than twelve inches diameter, and into that the plant should be got by the middle of June at farthest. The soil should consist of peat and loam at first, but as you shift the loam must be increased; and then, if after all there should seem to be a lack of vigour, top-dress with old cow-dung and charcoal, and give weak manure waterings. The plant will never naturally make a bush; the shoots are slanky, and half-inclined to twist, and no stake must therefore be used as a support; but when hopped to this stake, the strongest shoots being previously stopped, the points must be fixed in a dependant position to a ring of wire round the rim of the pot. By this mode persevered in, something of a conical shape will be secured, and by a less obtrusive method than a trellis or a forest of sticks; besides, the direction given to the shoots will secure their ripening, and consequent blooming freely. Everything should be done by a close, moist atmosphere, to encourage growth, until August approaches, then more air should be given, until, by the middle of September, the plants are fully exposed. In October they should be defended from heavy rains, and towards the end of it safely housed. I have never tried it against a wall; I have no doubt it would do well protected by glass. In pots, besides fresh soil, the chief trouble would be in the first year's growth, as after being established the plant would have the whole summer for growth and ripening. In pruning, bear in mind that bloom is chiefly produced on young shoots coming from last year's wood. The bending recommended encourages every bud to break.

HAEBROTIIAMNUS FASCICULATUS.—I cannot boast of my success with this in a pot, partly, I believe, from want of proper attention. I have seen it very fair against a wall, and have no doubt it would be a desirable plant for a glass-case before the severity of winter sets in. I mention it here for the purpose of stating, that a gardener from Yorkshire told me, not long ago, that he had seen it there trained up a conservatory column, and almost, if not quite, as fine as the plant of *eleagnis* he was then examining. Everything that will bloom freely in a greenhouse in winter, and cost little trouble, should at least be tried. Among others of the genus, of which I know but little, there is *H. cyaneus*, of which I know nothing; but if its habit were good, the blue flowers it is represented to have would render it a great acquisition. I may add here, as a note, that the same gentleman, when looking upon a blaze of *Poinsettia pulcherrima*, told me that they grew the white variety considerably in the north. Now I do not think we have got that at all common in the south; and though, for effect, it would bear no comparison with the dazzling crimson, yet the beauty might both be enhanced and mellowed by blending and contrast.

VERONICA ANDERSONII.—This is the most beautiful shrub of the family. The habit of the plant is compact and graceful, and, according as it is treated, it will continue to yield its pretty spikes during the autumn, and winter, and spring. In fact, by regulating the time of stopping, and then maturing the young growth, flowers might be commanded for the most of the year. To bloom in winter, cuttings of firm young wood should be inserted in sand, under a bell-glass, before Midsummer, potted off in sandy loam and peat, kept in a cold frame, freely exposed in autumn, and given an airy position in winter in a greenhouse or cold pit, applying no more water than it absolutely wants. With such a plant, or a young one purchased, begin to push growth along in March or April, by giving the plants a cloist, warmish

position; stop the shoots to increase their number, and continue nipping the strongest until June; keeping the strongest to the rim of the pot will be nearly all the training that will be required. Pot when necessary, until, by the middle of June, you give the last shift into an eight or ten-inch pot, using plenty of drainage, and a little charcoal and broken bricks to keep the soil open. From May, until the middle of July, a cold pit, where the plant can be kept rather close to encourage young shoots, will be the place for it. After then, air must be more freely communicated, until full exposure is given to the top of the plant in August. This will ripen the young shoots, and cause flower-buds to form freely. By the middle of October it will be advisable to remove the plant under protection; for though the plant itself is not easily injured, the incipient flower-spikes might be nipped by any sudden extreme.

VERONICA SPECIOSA.—Few shrubs are more graceful-looking than this, but the flowers, though interesting, bear no comparison to the above. It is one of the things I got tired of. Its free growth, and large size in a couple of years, demands so much space; though even as an evergreen bush it is interesting. It has been tried out of doors, and against walls, with more or less success. A glass-case would seem to be the place for it, the protection being removed in summer. Treated as above detailed for *Andersoni*, it will bloom in winter and spring in a greenhouse; but there should be no stopping the shoots after the middle of May, or they will not bloom early enough.

LITHOSPERMUM ROSMARINIFOLIUM.—A pretty, dwarf, blue-flowering, hardy shrub, found plentifully about Naples and the Grecian Archipelago. It deserves a place among hardy greenhouse plants in winter, as wet and frost spoil the flowers when out-of-doors. Plunged out-of-doors it might be introduced in November. It is easily propagated, and as easily grown. In beauty it is superior to more tender species. It deserves a conservative wall, though hardy.

AZARA INTEGRIFOLIA.—An interesting evergreen shrub that produces its bunches of flowers out-of-doors in winter in the south of the island, and, I have been told, in many parts of Ireland. I have never seen it in bloom, in such circumstances, north of London. Protected from wet, this and *A. dentata* will flourish as evergreens against a wall. Great quantities were raised of it by Mr. Knight, of Chelsea, from Chilean seeds, some twenty years ago. Compact bushes would ornament a hardy greenhouse in winter. Cuttings of firm, young shoots strike, but slowly, under a bell-glass or hand-light. Loam and peat will suit it.

SELAGO DISTANS.—There is nothing very striking in this small, white-flowering plant; but it is one of the newest of a family not particularly distinguished for blazing beauty. I introduce it here because it flowers so freely in winter and spring. Like the rest of its neighbours it comes from the Cape of Good Hope. Many of the species thrive nicely when planted out in summer. Cuttings of firm, stubby, young shoots, if struck under a bell-glass in spring, will enable you to have nice little potted-off plants before the end of autumn. These, kept in an airy, dry place in winter, stopped and shifted in spring, grown in a close cold pit in the beginning of summer, and more air and complete exposure afterwards, will furnish nice little plants for winter-blooming. Sandy loam, and a little peat or decayed leaf mould will grow it.

This paper may be considered as a supplement to those on hardier greenhouse plants in former volumes. An average temperature at night, ranging from 37° to 45°, will suit them. R. FISH.

THE AURICULA.

(Continued from page 264.)

SUMMER TREATMENT.—In dividing this subject into heads, I ought to have written spring and summer treatment, and autumn and winter treatment, for a different management is required at all the four seasons. The spring for blooming; the summer for growing; the autumn and winter months may be considered as requiring a protective treatment. In accordance with this arrangement, I shall, on this occasion, commence with *spring culture*. This commences about the middle of February; the plants should then be healthy, have green, broad foliage, with the soil moderately dry. Some fine day, about that time, have all the plants brought into the shed on the potting-bench, and while they are there let the frame and glass be thoroughly cleansed. If they stand on a bed of coal ashes let it be raked over, clearing away all moss and weeds, and apply a thin layer of clean, dry, coal ashes, or even sawdust. If they stand on a stage inside the frame (which is by far the best method, because they are then less liable to damp and mildew), let it also be well scrubbed; let the glass lights be placed against a wall to thoroughly dry; look well inside and outside for slugs and snails, and destroy them. While this cleaning is being done, let a careful hand examine the plants, clear away all decaying leaves, and a portion of the top soil; and if the pots have become mossy or dirty on the outside, let them be clean washed, without wetting the soil. When this operation is complete, the pots first done will be dry enough to handle again. Have some rich compost, in a moderately dry state, and put a layer of it in each pot. This is what is called, in the florists' language, a top-dressing. The compost for this should be richer than the one used for potting, that is, it should have a larger proportion of well-decomposed and sweetened manure in it. Finish this top-dressing neatly, pressing it gently round the neck of each plant; then, if any have been observed to be rather dry, give such a gentle watering, and let them stand on the bench till the superfluous water has drained away. The plants will then look tidy and fresh, and if they could speak would thank the operator for his pains. Replace them in the frame; cover them up effectually, if there is the least appearance of frost, for then they will be very susceptible and impatient of cold. Give air early in the morning if the weather will permit, and let out the damp that may have accumulated through the night, after such a thorough cleaning. Though this spring-dressing will be better done so early in the year, yet, if the weather is severe and unpropitious, it may be put off till the first week in March, but by no means later, for the additional stimulant in the new compost is intended to assist the plants to throw up stronger and finer blooms, and if it is delayed after that time the effect will not take place. After this the usual routine of culture should be diligently followed. The giving of air on all favourable occasions is the most important point at this season. Whenever the day will permit, expose them fully to the sun-beams; and other soft, humid days, give air by propping up the lights behind. This strengthens the plants, and encourages them to send up strong flower-stems. The giving of a due supply of water is also of great moment now. They should neither be wet nor dry, and when water is given, it should be in such quantities as to wet the whole of the soil in each pot. Great discrimination must be exercised on this point, and the quantity of water given to each plant should be in proportion to the state of the soil. If dry, give plenty; if moderately so, give less; and if wet, give none at all, but omit such plants till the next time or till they absolutely require it. The watering-pot should be a small one, with a

small, rather long spout, tapering to the end. Such a pot will give the operator power over the water so as exactly to suit the quantity each plant requires. By no means use a hose at this time of the year, but water the soil only, not wetting the leaves in the least; and, above all things, take care to use water with the obill taken off, not exactly warm water, nor yet ice cold, either extreme would be injurious.

The next important item in spring culture is to keep the plants as nearly as possible at an equal temperature. Actual frost would now cripple the blooms, and too much heat would draw them up weak, and cause them to flower prematurely. To prevent these extremes, cover them up securely every night. Straw mats, with a common garden mat thrown over them, are the most effectual protection I have ever met with; any labourer can make these straw mats during long evenings or wet days. They are best made of wheat-straw, and if put away when done with in a dry state will last a long time; three seasons at least. Too much heat may be easily avoided, by giving air and shading when the sun becomes too powerful. As the flower-stems advance the season will be advancing also, and then the covering at night may be reduced, but this must be carefully done, and the weather watched almost hourly, for often in April we have frosty nights, and once, by a too great security, or, I had almost said, carelessness, if the plants are allowed to become frost-nipped, the bloom for that season will be spoiled. It is better, therefore, to err on the safe side, and keep the night covering on a little longer, till the blooms are quite safe. The last week in April, or the first week in May, they should be in perfect bloom, and will require shading daily whenever the sun shines. Some florists remove them then into a shady place, and place them under hand-glasses standing upon a brick at each corner of the hand-light. This method certainly prolongs and preserves the bloom, but I do not approve of it generally, because the flowers cannot be so easily seen or shown as in a frame or on a stage.

T. APPLEBY.

(To be continued.)

CONIFERÆ.

(Continued from page 245.)

PICEA.—The Coniferæ classed by Loudon under this name are commonly called Silver Firs, because of the silvery-white colour of the underside of the leaves. Many of them form stately evergreen trees, and will grow in and thrive best in low, moist situations much better than the Spruce Fir, which often in such a soil become diseased and perish. This peculiarity renders the genus *Picea* valuable as an ornamental tree in such districts as the lowlands of Lincolnshire and Cambridgeshire, where the greater part of Coniferæ would look starved and miserable, and ultimately die before they had reached to anything like timber.

PICEA AJONENNIS (Ajoñ Silver Fir).—Though a native of Siberia, very little is known of this tree. It is said to grow to a great size.

PICEA AMABILIS (Lovely Silver Fir).—This fine tree, from California, is so extremely rare that our knowledge of its habits and uses are extremely limited.

PICEA BALSAMEA (Balm of Gilead Fir).—Native of Canada. Of all the Silver Firs this is the best known. It is highly ornamental, though not a tree of the first magnitude, seldom exceeding fifty feet high. It is less liable to disease than any other of its tribe, and grows very rapidly, especially in moist ground. From it the Canadians extract their famous balsam, which they call "Balm of Gilead," hence its specific name. There are two varieties of this really beautiful and perfectly hardy tree, one is named *Picea balsamea prostrata*, and is a

low bush, of a rather drooping habit, the other has the leaves slightly variegated, and is the *Picea balsamea foliis variegatis* of gardens.

PICEA CEPHALONICA (Cephalonian Silver Fir).—A native, as its specific name imports, of Cephalonia, on the Black Mountain, and is, therefore, perfectly hardy. It is a tree of second magnitude, rising to the height of sixty feet, with excellent timber, remarkable for its hardness and durability. The cones are erect, long, and slender; leaves sharp-pointed, with winged stalks.

PICEA FRASERI (Fraser's Silver Fir).—There is a considerable resemblance between this and the last-named species; the difference consisting in the leaves being more thinly placed upon the branches, and not being so bristly. It is very handsome, but being a native of Carolina is not so hardy, neither does it grow so tall, its average height being from 30 to 40 feet. The variety *Picea Fraseri Hudsonia* is a low bush, and is quite hardy, as it is native of the cold regions of Hudson's Bay.

PICEA GRANDIS (Large Californian Silver Fir).—This is one of the nobles of California, growing, as the late Mr. Douglas relates, to the height of 200 feet. The timber is of excellent quality. The finest specimen, probably, in England, is growing in the grounds at Dropmore. I had the pleasure of seeing it there last summer, and it was nearly nine feet high, and growing very rapidly. The large handsome foliage rendered it very ornamental and conspicuous, even amongst the fine plants of this tribe so profusely planted there.

PICEA NOBILIS (Noble Silver Fir).—Native of the same country as the preceding, and something similar to it. The only difference is, the leaves are of a silvery milky-green hue on both sides, and are a trifle shorter; by these it may be easily distinguished from its majestic congener. There is a fine specimen, growing near to the one mentioned above, of *Picea nobilis* in the same place (Lady Grenville's) and of the same height. The botanical difference is, however, chiefly in the cones, which, in this species, are very large, and covered with large reflexed bracts. This species is more common, because it strikes readily from cuttings, which soon form a leading shoot, and become, after the third or fourth year, regular-formed, handsome plants.

PICEA NORDMANNIANA (Mr. Nordman's Silver Fir).—A large tree, native of the north of Asia, on a high mountain. It is a handsome species, and believed to be perfectly hardy. The cones are short and broad, and reflexed at the apex.

PICEA PECTINATA (Comb-like-leaved Silver Fir).—This is our common Silver Fir. It is widely distributed, being found in central Europe and the west and north of Asia. It is well known, and therefore needs little description. There are some extra-fine trees, nearly a 100 feet high, in the park at Strathfieldsaye, the seat of the late "Iron Duke." The soil and climate there is moist—so much so, that most of the trees, both of the plantations and gardens, are hoary with lichens. If proof were needed, this would be sufficient to show that Silver Firs love a low, moist situation.

PICEA PICTA (Pitch Silver Fir).—A low tree, native of the Altai Mountains.

PICEA PINSAPO (Pinsapo Silver Fir).—A very handsome, slow-growing, regular-formed tree, now pretty common. The great distinction of this beautiful tree consists in its leaves being perfectly round, and placed equally on every side of the branches. It is a native of Spain, where, when of a great age, it reaches the height of seventy feet. No collection, however small, ought to be without one or two of this beautiful species.

PICEA PINNIFIDA (Pinnifida or Tooth-leaved Silver Fir).—Like *P. Webbiana*, but the leaves are longer, and not so silvery-white on the under side.

PICEA RAMBETORA (Sacred Mexican Silver Fir).—This

is a large, lofty tree, often attaining, in Mexico, the astonishing altitude of 150 feet. In this country it is, unfortunately, too tender to bear the open air, but I have heard there is a specimen in Devonshire that has stood out three winters uninjured.

PICKA WEBBIANA (Mr. Webb's Purple-coned Silver Fir).—In giving lately an account of the Conifers at the Rev. — Thicken's, near Coventry, I described a noble specimen of this rather tender species—tender because it is so easily excited to grow in the spring that the young shoots are frequently destroyed. The tree is hardly enough through the winter, but suffers from the late frosts after it has begun to grow. Probably, if it was planted on the north side of a hill it would not be excited into growth till the spring frosts had passed over. In the instance above referred to the specimen had apparently never been injured. It is an Asiatic species, growing on the mountains of Nepal, where it reaches ninety feet high. It is exceedingly ornamental; the leaves are broad, and arranged in two rows, and of a pure silvery-whiteness on the under side. There is a large specimen in the Pinetum belonging to that great patron of gardening, Mrs. Lawrence, at Ealing Park.

T. APPERBY.

(To be continued.)

FORCING OPERATIONS PROPER AT THE SEASON.

THE commencement of a new year always brings with it hopes of something being likely to improve. The very fact of the days lengthening, and less probability of meeting with so many dull and damp ones, helps materially to cheer on the enthusiastic cultivator, to whom the "dark days before Christmas" have a more or less depressive feeling. But as that ominous period is past, let us also hope that the deluging rains which ushered them in, and kept them company, are in a measure passed also; and with the opening year let us hope to have fewer of those drenching rains which have so much retarded out-door operations; at all events, the increasing length of days is somewhat inspiring, as by that the hopes of better times seem daily more near at hand; nevertheless, the same vigilance as hitherto is necessary to protect the various tender things from the effects of damp, while it is likely to be more wanted to protect them from cold; in fact, the past autumn has been unusually mild; many tender plants, capable of resisting damp, were unscathed after Christmas; that a check will be given is both probable and even wished for, as it rarely happens for a mild wet winter to be followed by a productive season; but, without attempting to foretell what may occur, it more becomes us to take the necessary steps to make the most of the present. Especial care must, therefore, be taken of all delicate seedlings struggling against the absence of sunshine, and the presence of undue moisture. The past autumn has been more than usually fatal to *Lettuce* and *Cauliflower* plants sown late and only temporarily protected; as where the vigorous character of the seed, accompanied with other favourable circumstances, was unable to support the young plant against the decaying effects of so much humidity, it speedily fell a prey to shanking; and many beds of what ought to be healthy seedling plants, present only a few scattered patches here and there—the remnants of a pestilence which the skill of the practitioner strove in vain to arrest. Such, however, as do exist, must be carefully looked after, as they cannot well be replaced without the assistance of heat and glass protection, which, for the next few months, will be less plentiful than heretofore.

The beginning of a new year is also a favourable time for the amateur of humble means commencing forcing

operations with the *Cucumber* and *Melon*; and, notwithstanding the improved and daily increasing demands there is on hot-water as an agent of heat used in the production of these fruits, there are many good old-fashioned dung frames yet to be found; and fruit so grown very often competes successfully with that grown in the more modern-heated structure in which pipes and tanks of every variety of make convey the heating power. This competition is, however, more equal where the productions are not wanted very early, as the dung-bed, however congenial a medium for supporting healthy vegetation, is not vested with the power to maintain it against the destroying influence of a too wet atmosphere and a sunless sky. For very early work it is therefore advisable to have recourse to fire-heat in some shape or other; and the same may be said of very late forcing; or, in more plain language, where it is desired to have a crop of melons ripen well in November, fire-heat must be applied rather briskly, otherwise that amount of warmth necessary to insure flavour cannot be furnished by fermenting matter alone, without also carrying with it that moisture which is a preventive to the quality wanted.

This late forcing must not be confounded with the retarding process, whereby an article, which nature intended to perfect itself at a fixed time, should, by some process used, be prevented from coming into use at that time, but kept back, and allowed to come forward at a later period; this course, as every one knows, will not do for melons; disease and disaster is sure to follow such a plan. A plant enjoying the sunny climes of the east for a very few weeks, cannot be expected to accommodate itself to the cheerless atmosphere of an English autumn, without the assistance which art and science suggest as being the nearest approach we can command to the condition which it has lost; and yet how far that falls short, may be easily comprehended by any one who has studied the climate of those countries where it is grown naturally, with our murky atmosphere even in summer, while in autumn the contrast must be still greater. But this is a digression; my purpose being more to give some hints as to early spring work; and in this we have a young plant to act upon; or rather, we have young ones to rear, and not old ones to keep in health. These duties differ so much, that we will, in the first instance, treat of the raising of young plants; and, at a future time, offer a few remarks on the preservation of old ones; and, supposing that good stable dung is to be had, and a frame or two at liberty, it will be proper, in the first instance, to throw up, mix, and turn the dung several times, to rectify that unruly heat it would otherwise attain if left unprepared; besides which, those impure gases, of whose names most gardeners are ignorant (but of whose presence they can form a shrewd guess by the rankness of the smell), are thereby driven off; and the moderate heat that is left is cleansed of that offensive effluvia, and becomes what, in gardening phrase, is called "sweet." This congenial warmth, when accompanied by a fair share of sunshine, is, perhaps, the most agreeable of any for plants enjoying; as with it a degree of vigour is infused, which we think can hardly be imparted by the united power of fire and water, however well they may be managed.

This mode of heating, the most "time-honoured" of any, has, nevertheless, been made the subject of many novel inventions—some trying to make it act without its moisture being brought to bear on the plants, by compelling it to heat some stratum, which, acting as a conductor, only allowed the finer particles to pass through. This latter mode is exemplified in those pits or structures which are worked solely by linings, and some of them are very useful in their way, serving the purpose intended admirably. "Mills's Pit" is heated

entirely by dung linings, and few cucumber growers have attained a greater degree of distinction than he has; but since the easy application of hot-water, few pits are built with the many internal contrivances necessary there without having hot-water added also. But there are many make-shifts which answer the purpose equally well; a pile of rough timber, laid as open as possible, with the box-frame placed on the top, and surrounded with linings, forms a very good hotbed, and one in which many things may be grown as well as on the best-contrived structure to which fire-heat is applied. This, of course, depends on the attention paid to lining, and other things; but for very early forcing, with only dung as a heating material, I would certainly advise the frame to be raised in such a manner. A few rough blocks, placed in such a way as to give scope for applying the dung on all sides, and partially underneath as well, which is done by having the bottom of the pit more narrow than the top, taking care, however, that it is sufficiently steady not to topple over, and, as I have said, as open as possible, because it is those interstices which form the chambers serving as reservoirs of heat; a firm material may be at top, and finally the mould on which the plants are expected to grow. The difficulties of this plan is obtaining a sufficient amount of atmospheric heat, after the bed is covered over a fair depth with soil; but that is overcome by applying brisk linings, and keeping some places inside comparatively thin of soil, to allow the heated air to pass through without losing much of its warmth on its journey. Another point must be attended to, which is, never to have the pile of open work too high, because the linings must always be showing above, otherwise the heat, instead of penetrating the mass of earth, &c., as required, would escape by the vacancy between the bottom of the dung-box and top of the lining. Thatched hurdles, or some other shelter, will be wanted to prevent drying winds cooling the dung linings too much. This attention, however, does not extend so far as to present any formidable difficulties; and as dung may be used fresh from the yard, without any preparation whatever, it becomes a matter of labour only, and even this is not so much more than that required for the formation of the ordinary dung-bed, and maintaining it in its proper state of heat, and at a time when it can derive but little or none from the atmosphere. But I will return to this subject again. In the mean time, I advise the amateur to look around and see what can be had for this structure amongst the things he has at command; and many makeshifts serve a purpose like this equally as well as the most perfectly-made pit erected by mechanical skill, directed by scientific principles; but, as in many other things, the secret of success lies in the due attention to many minor matters.

JOHN RONSON.

• A FAULT AMONG US.

By the Authoress of "My Flowers," &c.

It appears to me that there is "utterly a fault" among us. I do not know whether out-door relief in every Union is managed in the same way, but in *one*, I can truly say, "widows are neglected in the weekly ministrations." There appears to be very great cruelty in the way this class of persons are treated by the poor laws; they are most particularly regarded by God's law, and He has recommended them specially to the protection of man; but in the administration of the poor law, in at least *one* Union, there is, it seems to me, "utterly a fault."

It is said in the Word of God, by the Apostle Paul, in regard to his not wishing to be burdensome to the Corinthians—"For the children ought not to lay upon the parents, but the parents for the children." Now the Union, at least *one* Union, throws the widow entirely upon her children for support, and denies her relief at all, or only

partial relief, where her children are grown up, and able to work for their bread. Surely this is *cruel*. Can anything be more distressing to a mother, than to be dependant upon her children; to feel that every mouthful she eats is taken from them, and to have nothing of her own, but to be compelled to ask from her own offspring for every little article she wants? Which of the framers of such a law would himself stand, or leave his widow to stand, in such a painful position? I repeat, there is utterly a fault amongst us.

Thomas Edwards and his wife were rather above the common lot of labourers. He had a horse and cart, and gained his living in various out-door ways. He had a piece of allotment ground, too, and gotten comfortably. He was not a man of much loveliness of character certainly; he was greatly given to drink, although not what is generally called a drunkard; and his wife had by no means a light burden to carry on her pilgrimage with him; but she was a steady, light-thinking, hard-working creature, and brought her family up well and respectably. They were never running in the streets, but kept at home, taught to be clean, honest, and hard-working, and whatever was shown them of good, was by her precept and example. In time they all married. One daughter lived in the next cottage, the other settled in London, and the son took a coachman's place, and married in London too. As Edwards advanced in life, he was subject to severe attacks of illness, which often laid him by. At length the complaint from which he suffered became confirmed, and his powers gradually weakened. He worked when he ought not to have worked, because he had only his own exertions to depend upon, but he used, when he could, to send his little grandson with the cart, or got some other man to go for him. Poor Phoebe looked anxious and woe-begone; she had at all times a troubled look—and well she might—but now she saw her husband breaking-up, and expenses coming upon her, and whenever she did smile, it was a very watery one indeed.

At last Edwards became so ill that it was thought desirable to get him into a London Hospital as a last hope. There was a possibility of an operation prolonging his life; in the language of the world, it was his only chance, and he was accordingly removed to town. Poor Phoebe walked about her cottage like a ghost when her husband was gone. Joy had long departed from her face, but now many cares and sorrows were painted there, and the thought of the agony Thomas must suffer distracted her, and she fancied every day might be the one chosen for the last chance. Her good daughter, Sarah, was her prop and stay; and Bill, her son-in-law, rose up and treated her like his real mother. Friends called to see and cheer her, and she heard tolerable accounts of Thomas from their son, who was able to go to him, his master being out of town. A few weeks, which felt like years to Phoebe, passed in this way. Hope upheld her; but she had had no letter for some days, and began to feel more than usually anxious.

One night, about nine o'clock, a tap at the door was heard, and in walked her son from London. He came to take her to the death-bed of her husband. The operation was over; it had promised well, but symptoms suddenly came on that baffled all skill, and Phoebe must start by the first train in the morning. No one can tell how she got through the night, or her journey, but she reached London too late; at the very hour she stepped into the train, Thomas breathed his last.

Phoebe was very ill for a long time after her return. She could neither sleep nor eat. The funeral expenses lay heavily upon her; the horse and cart was a burden upon her mind; she had no husband to lean upon, broken reed as he had been; and her futurity was all misty before her. She, however, was brought to look to the Strong for strength; she was greatly supported under the load of her difficulties; her friends were interested for her, and her daughter and son-in-law the kindest of the kind.

In the course of a little time she sold her cart and horse, and crop of barley; paid her poor husband's funeral account, her rent, and what other little things she owed, and took up her abode in her daughter's house. Where she could say, with truth, that she had *nothing*, she went humbly to the Board of Guardians to ask for relief. She was strictly questioned, of course, but was told she could work in the fields for her bread. This went to her heart. She had

brought up a family without once burdening the parish. She was now advanced in life, broken in health, and quite unfit for out-door labour, to which she had never been used. But there was no appeal. She had children—they must support her. Her children were all scarcely able to support their own large families, and she said so; but there was nothing to be done. A loaf and a shilling a week was granted while she was on the doctor's hands; but when she no longer was sick that relief was to cease, and poor Phoebe was to be thrown upon those who have large families, and barely enough for themselves. Is there not utterly a fault among us?

Three or four other cases of this kind have passed under my notice. One of the widows is the mother of nine sons. They are as kind as they can be to her; but still, like Phoebe Edwards, she is a painful burden to them, and every parent must feel it bitter.

Phoebe is beginning to look cheerful, nevertheless. She has the worldly comfort of being perfectly free from debt, and that some of my readers can, I dare say, fully enter into. She has, moreover, a good hope through "grace," and that is a wondrous sweetener of the ills of life. She speaks with energy of the blessings of adversity to her soul, and the help and strength she has found in Him in whom she trusts. Her eye kindles as she speaks, and when she smiles, it is a sunny smile, and not a watery one. Still, she is penniless; and although her child and son-in-law work for her, and make her welcome, she is but a pauper in their house, and she knows that every bit of food she eats is taken from the mouths of the children.

Blessed are those children who "honour" their parents as Sarah does! and blessed are the sons-in-law who rise up like Bill to succour and protect the widow! Blessed is the widow who trusts in the Lord, and cheerfully submits to His Holy Will. She will find the arm of the Lord is not shortened, but mighty to save. Still there is utterly a fault among us in this matter, for surely widows are special objects of consideration and care to all! If we profess Christianity, if we consent to take the Bible as our rule of faith and practice, the widow should be honoured and sustained, and shielded from want, in our congregations. But as it is, at least in some places, I humbly venture to submit to my readers, that the blessing of God is not regarded, nor can be expected, for there is utterly a fault among us in this thing.

BRAHMA POOTRA FOWLS.

IN a recent valuable contribution to THE COTTAGE GARDENER, in which the "vexed question" of the respective merits of the Shanghae, Spanish, and Dorking fowls seems to be discussed with admirable judgment and impartiality, an extract is introduced from a Canadian paper, wherein mention is made of two or three breeds of fowls hitherto unknown in this country, and in reference to which new breeds, your contributor (who signs himself "Coolin") expresses a wish for information. "Perhaps the following particulars respecting one of them, "Brahma Pootra" fowls (taken from the "Northern Farmer," published in Oneida county, U. S.), will be acceptable to him, and to the generality of your readers, who are interested in kindred subjects; the more so, as they will, I believe, have an opportunity, at the approaching Metropolitan Show, of seeing a fine young pair of birds of this breed, belonging to Mrs. Hoster Williams, of Eaton Mascott, near Shrewsbury, to whom they were sent by Dr. Bennett, of New Hampshire, U. S., a name known, probably, to many of your readers, as the author of an excellent American book on poultry. Before giving the extracts from the "Northern Farmer," I may observe, that this breed appears to have been imported into America only within the last two or three years (having been brought by some sailors from a district on the great river in India, from which they derived their name), and that the American fanciers are as yet divided in opinion as to whether they are entitled to be considered a distinct breed, or only a superlative variety of the Gray Shanghae, or, as some think, the Chittagong breed; some maintaining that the breeds are identical; others, with Dr. Bennett at their head, affirming their conviction that, even

apart from the consideration of the widely-separated localities in which the respective breeds have their origin, they present sufficiently well-marked characteristics and points of diversity to entitle each to be considered a distinct breed. Whatever truth there may be in these opinions, certain it is, that there is a rage among transatlantic amateurs for what are supposed to be real Brahma Pootras, which rank highest of all the large breeds, in the estimation of those who would seem to have had the best opportunities of judging of their real merits. Indeed, the mania there for the best varieties seems just now as prevalent, and quite as fierce, as with our amateurs for the choicest breeds in this country. And a pleasant jest of the facetious editor of the "Northern Farmer" would seem to point to the inference, that the prices realised for them is not less fictitious than those frequently obtained with us for the most approved specimens of Buff Shanghaes. After giving a few instances of the sums at which good specimens of Brahma Pootras had been sold (seventy-five dollars per pair for grown birds, and sixty-five dollars for chickens), he adds—"This will do, we think. By the way, if any one has a good snug farm that he will dispose of for a pair of these fowls, we shall be disposed to trade, if application be made soon!"

The following is a description of this breed, as given by Dr. Bennett, in a communication to the "Northern Farmer":—

"The cock is mostly white, with the neck hackles pencilled with black; the rump hackles of a gold or yellow colour; the tail black, with glossy green plume feathers; wings slightly pencilled with black. Pullets white, with black tails, and neck hackles pencilled with black. The comb is small and serrated, though frequently they have the perfect pea-comb of the Sumatra Pheasant Game fowl—always a rare indication of fineness of flesh. The wattles are small, but the ear lobe extremely large and pendulous. The legs are yellow, and usually very heavily feathered, though I have seen some excellent specimens with smooth legs. Their weight, at maturity, is from 22 lbs. to 25 lbs. per pair, and they are quite symmetrical in their conformation. As layers they are unsurpassed by any breed. I have tried them side by side with the Imperial Chinese, and the Shanghae, and find the three breeds about equally prolific. They lay a larger egg than any other Asiatic fowl, not excepting the great Hoang-Ho fowls recently imported from Shantung and Honan, in the valley of Hoang-Ho river. On an average, their eggs are fifty per cent. larger than those of the Shanghaes or Imperial Chinese. They differ from the Gray Shanghaes in the following respects:—They are lighter coloured, shorter-legged, more compact in form, have larger ear-lobes, and smaller combs and wattles, deeper-breasted, but shorter-quartered. They are more active, and better layers."

Mr. Miner, the editor of the "Northern Farmer," says:—"We presume that there are no larger nor better shaped fowls in existence than the Brahma Pootras, nor any that lay so large an egg. They equal the best in laying, and some contend that there is no fowl that can equal them in this respect. They can be confined by a fence four feet high, effectually, not being able to fly at all, in consequence of the shortness of their wings. They are not disposed to ramble, if allowed, but remain constantly near home. They are particularly fond of grass, and seem to live almost as much upon it as geese. We have been surprised at the small quantity of food they consume. One quart of corn, and the same of corn meal, ground in the cob, is as much as one pair of old Brahma Pootras, one ditto of Hoang-Ho fowls, and twenty-one chickens from three to four months old, now consume daily."

The Rev. R. W. Fuller, of Massachusetts, in a letter to —, says:—"I have a pair of Brahma Pootras of the same breed as those of Dr. J. C. Bennett, and I consider them decidedly the most beautiful and splendid fowls ever imported into this country. Their colour is white, shining on the back to a rich cream colour; the hackles on the neck slightly streaked with black. The legs are yellow, heavily feathered with white, and shorter than the Chittagong or Shanghae, giving the fowls a more beautiful proportion. They are very gentle and peaceable in their disposition, and have a stately and graceful gait, &c."

The committee of judges on the different classes of fowls

exhibited at the annual exhibition of the "New England Society," for the improvement of domestic poultry, held on the 11th, 12th, 13th, and 14th days of November, 1851, speaking of the Brahma Pootra fowls, say:—"Some mammoth items of this variety were shown by Dr. Bennett, S. O. Hatch, and J. Parkinson, each possessing great merit. Mr. Hatch's lot was entered under the head of Gray Chittagongs, but were really pure Brahma Pootras, and decidedly better fowls than any Chittagongs in America. They are better layers, lighter in colour, have shorter legs, more

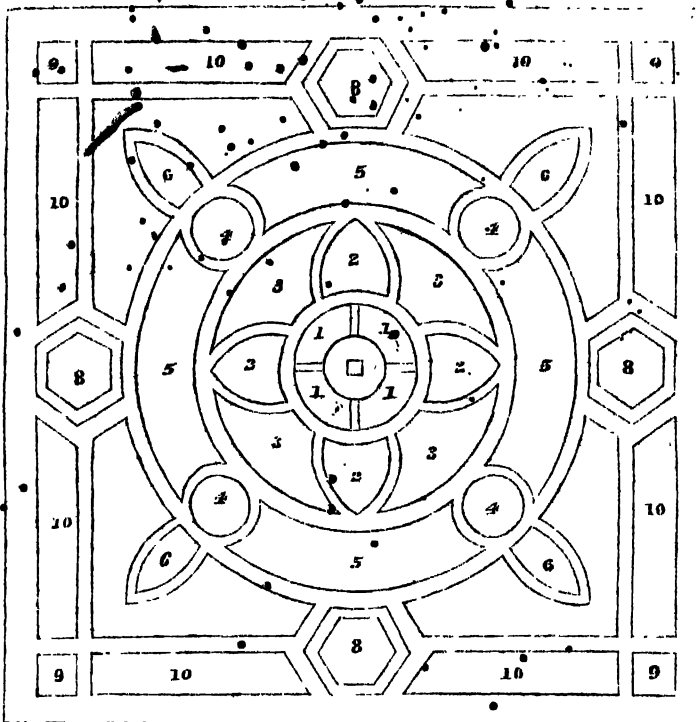
compact forms, larger ear-lobes, and smaller combs and wattles, and in every respect are vastly superior to the Chittagongs. As the judges desire that every variety of fowl should be called by its right name, they cannot sanction the application of the title Chittagong to this excellent stock, when in reality they are perfect Brahma Pootras."

The novelty of these details, and the interest with which they will probably be regarded by many of your readers, must be my apology for troubling you with so long a communication.—W. C. G.

FLOWER-GARDEN PLANS—No. 3.

HERE is the first fruit of the criticism on the Plan No. 1. I am so unwilling to let it pass for another month, that I am under the necessity of sending it to the engraver by "return of post," so the planting must be deferred for the present. In another month or two we may have a third plan out of the same original ideas as are evinced in the first; at any rate I shall not shrink from the promise to plant No. 1; and this in due time for next summer. How is it that none of our young readers, who understand so well the planning of a piece of ground, will undertake to show the planting of the beds? Surely it cannot arise from a dread that I should criticise them too severely. I do not know another branch of our calling so eminently qualified to teach one the art of thinking, as that of filling in, or planting, different designs on paper. Thinking is as natural to us as breathing the air; yet the art of listening and the art of thinking are more difficult to learn than the art of pruning roses or peach-trees. Practice is the best master after all, and without it, all our principles and ideas, our plans and criticism, and all our illustrations, go for little in teaching the young ideas how to plant. Therefore, let me urge once more on the attention of our young friends to make the best attempts they can for planting our first and third plans. All that I insist on is, supposing the plan is on gravel, that figures 6 be planted in green without flowers; or, if the plan is on grass, that these sixes be planted with a low, very dark-flowering plant, as the dark variety of the double purple *Senecio* or *Emma Terbensa*, according to the size of the beds; but the growth should accord with that of the plants on either side in beds 7.

The reason for this arrangement is, that all the No. 6 beds are so many expedients to take off the otherwise disproportionate size of No. 7; therefore, a colour in No. 6 contrasting, or harmonising, with No. 7, would be like a house divided against itself; or, easier, if we call No. 7 a house, and the flowers in it a roof or thatch, No. 6 being part of it. Would it not look very odd to have the part No. 6 covered with slate, and the rest thatched with straw or reeds? But you would not think it out of place to have Nos. 6 or 7 covered with straw, and the rest covered with reeds, although the colour of the straw and reeds might not be exactly alike. It matters very little whether you make the corner figures, Nos. 8, flowers, vases, a single cypress, or Irish yews. The rest is easily done, if you keep in mind that the very centre is a vase, and may be four feet high or more; therefore, the plants in the four beds, No. 1, need not be quite so dwarf as the size of these would indicate. The leading principle of this plan is the least understood of all the tactics of flower-gardening. I allude to the principle by which your company are turned right or left, or "all round," before they can reach the centre, and this I shall illustrate by a thing in season. Suppose we have a country dance of sixteen couples, and that the first couple join hands, then down the middle and back again, and so on with the whole of them, what a tiresome dance it would be;



but not half so bad as going straight forward to the middle of a flower garden. The most indifferent of a whole party, as to flowers, could not get along in the above plan without being compelled, as it were, to look at them, if only to see that he did not trample on them as he went about.

D. BEATON.

DISEASES OF POULTRY.

APPLEXY.

A HEN, two years old, who had laid almost daily for more than a fortnight, was accidentally shut out from her usual nest for two days, and did not lay during that time, upon access to her laying place being opened, she was observed to proceed thither, but in five minutes after was found dead upon her back. The body was sent to Mr. Tegemeier, and the following is his report, affording one more warning against the mistake of high feeding breeding hens.

"I have carefully examined the hen forwarded by you. She was in high condition, and, for a laying hen, extremely fat; the digestive organs were perfectly healthy, both the crop and gizzard filled with food; the oviduct contained a perfect hard-shelled egg, which would evidently have been laid directly had the hen lived; there were also numerous immature eggs, one of which had been broken by some concussion after death. All the organs contained in the body were in perfect health. Around the top of the spinal cord and base of brain was a considerable quantity of

coagulated blood, which had escaped from a ruptured vessel, and by pressing on the brain, &c., had caused death; it was, therefore, as you suggested, a case of apoplexy. I should be inclined to doubt the disease being caused by the hen's having been accidentally shut out of the laying house; but I should feel inclined to attribute the attack to the extremely high condition of the bird. W. B. TREGETMEYER.
"Tottenham."

DAHLIAS OF 1851.

(Continued from page 187.)

MALVINA (Turner); rather flat on the face; but, if all the flowers are left on the plant, and put out early, it will make a very useful flower, it being of a colour we want.

MORNING STAR (Turner); very bright in colour, but I do not like the form; and the petals are very rough. I shall not grow it.

MRS. SLUTHEY (Whale); useless.

NORSE (Salter); white tipped with rose. Rather too large as grown by me; but I think by leaving all the blooms on the plant this will be a really first-rate flower.

PHANTOM (Noakes); large, coarse, and bad.

REMBRANDT; orange, striped with red; very bad habit, but not bad in form, and will be useful as a striped flower. I shall grow it again.

SCARLET KING (Green); the petal is good, but every bloom is too low in the eye for a show flower; it comes too coarse.

REDGAUNTLET (Keynes); this flower was sent without charge, and was worth several that were charged; being a good red, every bloom perfect, and well up. I shall grow it again, as I think it the best red yet out.

SIR F. TRESEMER (Rawlings); very fine; rosy lilac; particularly late in the season. One of the very best forms, and ought to be planted very early.

UNA (Keynes); white; rather thin, but good eye. I shall try it again, but do not quite approve of it. Always constant with me, and fit to show.

VICTORIA (Cook); crimson tipped with lilac. I do not like it; it is too low in the eye.

WHITE STANDARD (Brittle); blush white; very good with me; form first-rate. I shall grow it again.

MISS BATHURST (Dodd); pretty colour, but too thin. I shall not grow it again. It is a fancy flower.

MISS WARD (Turner); another fancy yellow tipped with white. Not good.

NANCY (Keynes); dull in colour, but form very fine. It requires a moist growth. I had a few blooms quite models, fit for any stand. Fancy red tipped with white.

QUEEN OF WHITES (Drummond); rather flat; good colour; and will be very useful. I shall grow it again.

SIR R. WHITTINGTON (Drummond); dark ruby; quite a gem. Rather low in the eye sometimes, and requires good growth. First-rate in every respect.

SPARKLER (Barnes); very so-so. I shall not grow it again.

SPECTABILIS (Salter); another striped flower like Rembrandt, but decidedly better in habit, and I consider it a better flower. I shall grow it again.

TOM (Drummond); comes all one-sided; petals not regular. I like to see them laid on like scales on a fish's back. Not good.

TRIUMPHANT (Keynes); this flower came at first very small, and low in the eye; but having strong plants I cut out very severely, and had some very first-rate blooms, nearly all selfs. I had two fancy blooms, and they were exquisite. It requires extra good growth.

This completes my memorandum. I have given my opinion without fear or affection, with honesty of purpose; and I think growers may depend on these remarks, for they are pretty true. OBSERVER.

NORMANDY.

(Continued from page 273.)

Though the whole of Normandy may be spoken of in general terms as a province of tolerably uniform character,

fertile, undulating, well-wooded, and well cultivated, with a marked race of inhabitants (a Norman type of physiognomy and general build is perfectly distinguishable), still, different districts differ in a few slight points of manners and of produce, which I may perhaps by-and-by particularize. For instance, in the Cotentin you find that article of bedding which you had left behind you in Germany, the *edredon*, or bed of eider down, to lay over you instead of blankets. It is not at all a French fashion; the reason you find it here is, that there has been long and great intercourse between the Cotentin and Iceland. But the caps of the women are the most strange, varying, and distinctive evidences of topographical peculiarity of costume. Each town and neighbourhood has its own cap to display; so that, as these forms are very ancient, an illustrated treatise on the caps of Norman women, with portraits, millinery details, and a map, would be anything but an uninteresting contribution to Ethnology. They are quite as characteristic as the costumes of the Swiss Cantons. To describe them intelligibly is next to impossible. The simplest and the ugliest form is when the woman wears on her head a common white-cotton man's night-cap, with no other ornament than the tassel at the top. It made me think of women going to be hung. About Caen is the head-quarters of these unfortunates. Others there are that seem to have a white apple-turn-over laid upon their forehead; others, again, have modelled their caps after the pattern of an extinguisher. About Candelee and La Mallerie is a tall cylindrical species of cap, which we called "church-steeples," surmounted by streaming ribbons, and finished off with a couple of mainsails at the base. One form, which just manages to miss being a becoming head-dress, is that whereon the lace or net border is made to stand out stiff in front and all round, as if it were trying to imitate a saintly glory. At Vire, they wear a pleasing little sort of cravat tie, which Brummel must have envied if he ever saw it, on the top of the head, though not on the top of the cap. In the north of the Cotentin, as at Valognes, the head-dress becomes enormous: blown out with air, expanded with wire, and stiffened with starch, it is most imposing. But what becomes of it in an equinoctial gale would be interesting to inquire. Fancy a woman with a large white butterfly, a yard across from tip to tip of wings, alighted on her head, and then, from the place where the body of the butterfly would be, a muslin balloon arising of corresponding dimensions. And yet, with a dignified matronlike carriage, and the rest of the dress of rich materials, and neat, the whole effect is not ridiculous. Norman women of considerable substance still hold to the head-gear of their ancestresses. Some of these articles are even heir-looms. I am assured that there exists caps in Normandy worth from 1,500 to 1,800 francs a head, from the value of the Flemish and the English lace which adorns them; *point d'Angleterre* being in high favour. Observing an English lady make a full stop as she passed a tradesman's wife on Sunday afternoon, I inquired the reason. "Why, only look at that lace!" she replied. I did look, and lamented my want of connoisseurship. But the most elegant, if not the most costly caps are those worn by the women of Granville; there is a turning up at the sides, and a rolling back of the materials, which gives them quite an oriental or turban-like style. Add to which, that the face seen beneath is sometimes very modest, pleasing, and pretty. Granville would furnish a better model for a Madonna than any French town I know. It is said to have been originally a Phœnician colony; the costume, therefore, and the east of countenance, may be relics of the east. But Granville is altogether remarkable, from its rock, its granite church, its oyster *parcs*, and its long-descended inhabitants. Little girls do not wear these curious caps, nor cap I say at what age they assume the head-ornaments of womanhood; probably, like young Guinea-Fowl, they shoot their horn when about two-thirds grown, for at Avranches, where they wear a sort of blue paper or silk dunce's cap, as the foundation for the muslin and the lace, I observed some young women who might be four feet high, and they were topped, or continued, or produced, in mathematical language, by caps at least half as high as themselves. Do not imagine that the subject of

Norman cap^s is exhausted; it is scarcely yet touched upon, and promises to be as interesting to the artist and the antiquary as that of Norman architecture.

Normandy is milder and damper than Picardy. A very few slight observations will tell long tales about the meteorology of any country. A gardener especially has his eyes open to these trifling but significant phenomena. Where I am writing, we have standard fig and apricot trees. Wherever standard fig trees answer, the winters cannot be very severe; and wherever standard apricots bear good fruit, the summers must be tolerably genial. Ferns are seen growing in spots where they could not easily exist if they were usually surrounded by an arid atmosphere. The advertising appendix to my "Murray's Handbook," contains some beautiful little fronds gathered on the granite rocks at Véz. The thatched cottages in Norman villages are very fond of wearing on their ridge or backbone, a decoration which looks like the erected bristles of an angry wild-boar: it consists of a row of iris, or orpine, or poly-pod, according to the taste of the proprietor, planted in a row of clayey-earth along the very top of the angle formed by the roof sloping each way; and it mostly flourishes, and flowers, and waves in the wind, with a luxuriance unattainable were it not frequently watered by a supply of visible or invisible moisture. Notwithstanding this, Normandy is one of the healthiest provinces in the world.

For comparison's sake, I may observe, that the climate of the north-east corner of France is more variable than in most other parts of the country. The map will show that a north or a north-east wind reaches it unmitigated from the North Sea itself; whereas, the departments but a little to the west are sheltered from these inclement breezes by Great Britain, which tempers their rigour and breaks their force. On the other hand, a wind from the south and the south-west comes charged with all the warmth it has collected in passing over an extensive continent, so that within the course of a few days very considerable alterations of temperature, of drought and moisture, may be felt. At the beginning of the week you are melting with Italian heats—at the end of it you are shivering with an Orkney chill. Hence the local proverb respecting the month of April, which might, without injustice, be extended to May.

*Avril, il est doux;
Quand il s'y met, il est pere de lous.*

April and May are soft and mild;
When they once set to work, they're the worst of the wild.

Against these sudden changes, delicate and susceptible constitutions should be on their guard, by keeping warm clothing ever at hand; otherwise, the country in the uplands is very healthy. The pure air of the hills, the gales that sweep over the uninclosed fields, and, for a great part of the year, the extent of the dry-growing woods, manifest their usual effects on the appetite, the spirits, and the complexion. But towns situated low, at the mouths of rivers, or on the site of ancient marshes, as Gravelines, Dunkerque, and St. Omer, are apt to have insinuations thrown out against their character for salubrity. Normandy is also variable, the Cotentin particularly so; but except in one or two spots on the Seine, and there only in the autumn, I have not heard a whisper of malarial.—D.

ON CIDER-MAKING IN THE COUNTY OF HEREFORD.

As "Somersetensis" wishes for information respecting the mode of making Cider in the counties of Hereford and Gloucester, the writer, who has, during the last few years, visited the former county during the cider season, is willing to afford such information as he is capable of doing, and which has passed under his general observation.

There is much to be said in favour of their system, still the process is of that slow nature that few Somerset cider-makers, who generally make from 100 to 1,000 hogsheds annually, would adopt it, as no doubt much waste would occur from the fruit getting too decayed before it would be possible to make it into Cider; as I should think, that with the mills and screw presses used in Somersetshire, five,

hogsheds are made with the same labour as one in Herefordshire.

As you travel through the counties of Hereford and Gloucester, you are not struck with the quantity of orchards (as in Somerset), and the trees are generally small. The pear trees seem to thrive much better than the apple trees, and they attain an immense size, from which a great quantity of Perry is made. The same mills suffice for both, and, as before said, the quantity of Cider not being large, the quality is of great importance, and that is obtained by the means of crushing and grinding their apples under a heavy stone cylinder moving vertically in a circle, which, being fixed in a frame, is propelled by a horse round a bed or trough into which the apples are placed. The pulp is scraped into the centre of the bed, by means of a scoop attached to the frame, and following immediately behind the stone, which continues to roll round till even the pips are entirely bruised, from which a strong aromatic flavour is obtained, and which adds so much to the quality of the Cider. As soon as the pulp is sufficiently ground, it is placed in horse-hair bags, and the juice immediately pressed from it, which has such a muddy, filthy appearance, that no one would imagine such a delicious beverage could afterwards be obtained from it. The usual fermentations and rackings then take place as is practised by experienced cider-makers in Somersetshire. A few enterprising farmers, in the neighbourhood of the city of Hereford, lately obtained some of the Somerset mills and presses, imagining that from the quick mode of making it they should save a great amount of labour, but I believe there is not an exception in which they have not all discarded them, and returned to their old system, finding they lost in the quality as well as quantity of their Cider.—T. D. P.

MISCELLANEOUS REMARKS ON POULTRY.

FEEDING.—This subject is not generally so well attended to as it deserves; it is true, where fowls have a good run they can provide themselves with many a dainty morsel, and will do well with one good feed of corn per day; but it is not always that persons keeping fowls can accommodate them thus extensively, and it is therefore necessary to provide what they require by artificial means. Most fanciers are aware that fowls require other things besides sound corn for their welfare, such as green, and animal food, calcareous matter, and grit; and I consider it absolutely necessary for them to be supplied with these more particularly while laying and moulting.

The green food may consist of grass, lettuces, chicory, cabbage, &c. The animal food is, naturally—snails, beetles, grubs, worms, maggots, &c.; and, when a supply of these fail, then butchers' offal, tallow chandlers' greaves, or any refuse meat, will be found very advantageous. In winter, an allowance of fat will be found beneficial, as, by the internal combustion of the carbon, of which fat is principally composed, the animal heat will be sustained, and, consequently, laying will be promoted.

Calcareous matter enters largely into the formation of bones and egg-shells. Chalk, in small pieces, is recommended; but I do not find the fowls very fond of eating it: naturally, they eat the shells of snails, and other small land shells, which, with the hard covering of beetles and other insects, contribute largely to the production of egg-shells. Egg-shells, thrown from the house, are greedily eaten. The best substitute I have found to consist of bone-powder, a small quantity of which may be given daily in their food; and this I have found to cure some of my high-bred hens of laying soft eggs, when a regular cramming with chalk did not succeed. Hempseed, linseed, and sunflower-seed, are very nutritious, and conducive of laying.

For rearing young chickens, I have found milk-curd (where easily obtained), mixed with ground oats, to be the best food; where not obtainable, I use ground oats, mixed with water, with a small quantity of bone-powder added; or rice, parboiled and rolled in ground oats or barley-meal, so as to separate the grains. And a piece of bullocks' liver, boiled hard and grated, is also an excellent occasional treat for the little chickens. Ducks are famous trenchermen,

and require to be filled. I have found stinging-nettles, chopped and moistened with pot-lignor or wash, and mixed with a small quantity of pollard or meal, to be a cheap food, and, with an occasional feed of corn, they thrive well on it.

INCUBATION.—I have kept an account for some years of the time my various birds sit, and the following is a list of the time occupied in hatching their eggs:—

Canary birds, 14 days; Doves, 14; Pigeons, 16; Fowls, 21; Guinea fowls, 25; Ducks, 26; Turkeys, 26; Geese, 31; Muscovy ducks, 35.

Although Ducks and Turkeys hatch in 26 days each, I have found, when the eggs were set together, that the Turkey-eggs hatched about six hours earlier. I believe the above list to be quite correct; but I have known most of them occasionally to have been longer through accidental causes.

HATCHING NESTS.—These I prefer on the ground, and formed of damp turf, lined with dry heath and Lichen or Liverwort, collected from trees, &c. The nest should be made so large that the hen can just fill it, not very deep, and as nearly flat inside, at the bottom, as possible, so that the eggs may not lean against each other, or they are very liable to be broken, especially by the hens turning them. A little Scotch snuff is also a good thing to keep the nests free from vermin. Why I recommend ground nests, and rather damp, is, that it is admitted, that the hen that steals a nest in a hedge or coppice generally hatches all her eggs, and brings home strong chickens; whereas, the one that sits at home, in a dry box or basket, often spoils many of her eggs, and her chickens are frequently weakly, which I attribute to the great evaporation that takes place from the egg during incubation in such unnaturally dry nests, which also renders the chicken feverish and weakly. In support of which opinion, I can say, I have hatched my best broods in nests thus made and well moistened; and frequently have not had one egg in a sitting miss.

BREEDING.—Never breed from relations; always select strong, healthy birds of the same variety; do not think, by mixing the sorts, to improve a breed, a cross may do well enough to eat, but if a breed is crossed it is not to be depended on afterwards, as they will often run back for many generations. The formation of a new variety will take a very long time, and then mostly ends in disappointment. Keep each breed pure, and improve it by saving the best specimens, and add good fresh blood of, as near as possible, the same.

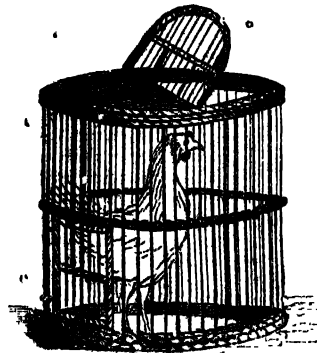
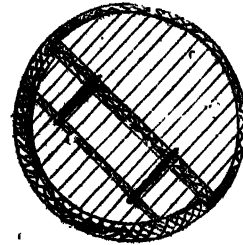
I think the eggs of a hen may be depended on during three weeks after her removal from any male, and without being put to another. Thus, I found the eggs of a hen that had been removed from a game cock took after him till the tenth day of separation; and that the eggs of another, that had not been with a rooster, produced chickens as early as the fourth day after being put to one. The hens in both cases were laying.—B. P. BRENT, *Bessel's Green, Sevenoaks*.

PENS AT POULTRY SHOWS.

ALLOW us to offer a few suggestions upon Poultry Exhibitions, as they now bid fair to be as numerous and of as frequent occurrence as our Horticultural and Agricultural Shows. With the latter, indeed, we now generally find them united, and those who are lovers of the feathered race would think it an unpardonable omission if they were not so. This taste is steadily increasing, and but few districts, within a short time, will be without, at least, its annual Poultry Exhibition. This, we think, would be readily effected if any plan could be devised so as to facilitate their arrangements, decrease the expenses, and diminish the labour of their committees of management.

One question is—Could this not be done simply by requiring parties exhibiting to send their birds in such baskets, or pens, in which they could be shown, to be made after a prescribed design, or pattern, so as to preserve their uniformity? This would remove, at once, the great impediment to provincial and local exhibitions, and without increasing greatly, if any, the expenses of the exhibitor; besides, which is of still greater importance, with much less risk of injury to the birds sent, as they would not have to be

removed from basket to pen, and from pen to basket. Last, but not least, such a plan would curtail, by many hours, the bird's confinement, by greatly facilitating their reception, arrangement, and returning. Such moveable pens would also afford judges advantages in cases of nicety of decision, by placing the birds in their own baskets along-side of each other, which cannot be done in the fixed pens without catching the birds.



The above is the style of basket we propose. It was the one used at our last Cheltenham Exhibition. The baskets were arranged on elevated platforms, or tables, about two feet high, showing the birds off well to the viewer, and at the same time giving a light and pleasing effect. Turkeys and pea-fowls were, on account of size, exhibited in built pens. The baskets were of three sizes, viz., first size for the larger varieties of fowls and ducks, 2½ ft. in diameter and 2½ ft. high; second size, for the smaller, 2 ft. in diameter and 2 ft. high; third, for pigeons, 1½ ft. in diameter, and 1½ ft. high.

The fowls were exhibited in threes, geese and ducks in couples, pigeons in pairs, chickens in fours. A canvass wrapper, or bag, should be put on the basket when travelling, taken off on arrival, and neatly tied on the side, covering about one-third part. Thus protected, the baskets could be placed close to each other without fear of any combative encounters.

We hope to see soon some general style of poultry-exhibition-basket devised and adopted, so as to facilitate and encourage the getting up of these now useful and entertaining exhibitions; making it no longer a difficult matter for the clergy and others of our rural districts to accomplish.

JAMES BROOKERS, *Cheltenham*.

[This suggestion we think very good; but we question whether a better shape would not be that of a parallelogram with the whole front to let down; like a milk liner's basket, placed upon its side.—E. C. G.]

PREPARATION OF MUSHROOM BEDS.

ALTHOUGH the majority of growers, whose number of beds are limited, generally make them all up in the autumn, and trust to their continuing in bearing the whole season

after they have begun, yet there are others who, having the necessary means and conveniences, make up a bed occasionally all through the season; a few words to such may be both seasonable and advantageous, as it must be understood, that the same means used in September or October are more likely to become successful than those used in January. The reason "why," is not so easily explained in this case as that of many other problems in forcing; unless we take it for granted, that the spawn runs with more avidity in those months immediately following the period when it is found producing mushrooms in a natural way; or, perhaps, the absence of success may be traced to something defective in the spawn used, which, however, can hardly be the case, because we have used it at all seasons, and have generally found that put in about the month of October the most productive of any; even where a later crop had many other advantages. Another thing late mushrooms have to contend against are the attacks of innumerable insects and other enemies, whose destruction or prevention is more difficult than might at first be supposed; but such is the case, and beds bearing late in the spring become infested with maggots and the numerous small fry which find their way into such snug quarters as this favourite production is often treated with. Nevertheless, where mushrooms are wanted for table all the year, successional beds must be made; and the remarks we now offer on their formation will serve, with some slight variation, for the whole year.

In the first place, a supply of good useful dung must be had; that of horses has from time immemorial been recommended, but that of sheep, and, I believe, deer, might be profitably used likewise: certain it is, that I have seen an excellent crop of mushrooms from a bed formed of sheep-dung alone; and, what may not surprise those who know its value, the specimens there produced were thicker and better in substance than those from horse dung; and though the bed was exceedingly thin, and partly mixed and coated with loam, yet it continued to bear for many weeks; but then it was formed at a more favourable time of the year than this. Still, I must admit, that a quantity of sheep dung mixed with the other is attended with a benefit, and as it is often to be had in considerable quantities underneath trees and other sheltered places where sheep are accustomed to rest at nights in the autumn, its collection and removal from thence is both easy, and little or no detriment to the land it is taken from. Horse dung is tolerably well known, and for purposes of mushroom growing, at this untoward season, should be procured without being heated; it is not easy to have it so, if an accumulation of it be left for many days—and it is not too much to say, that throwing it up into a heap when fresh, and allowing it to lie untouched for only three full days, will have seriously injured it for the purposes we now intend it for; or, in fact, for heating purposes either. True, three days may be insufficient in some instances; but in others we know they would; and we therefore warn the inexperienced particularly on this point. For dung that has undergone a heating process to a degree that would almost cook food, has parted with some of its most nutritive parts, and would seem little better qualified to maintain vegetation than the ashes or other residuum of a furnace, which, we all know, are for a time sterile; but by exposure to the atmosphere, and, perhaps, the conjunction of other matters, lose their pernicious qualities and, assimilating to themselves those of an opposite kind, speedily become fertile in their turn, and, in many instances, are used as such with advantage. Now though we cannot affirm that horse dung that has been heated so as to become white, and remains so, is absolutely poisonous; yet it is beyond a doubt, that in that condition it is repulsive to all but the lowest class of vegetation; that class to which the "mould" and mildew owe their origin, and whose dominion is said to be more extensive than any other. But though the mushroom belongs to a family related to this pernicious one, yet its presence is not so universal, and is generally hailed with delight when it shows itself, instead of that dislike with which the many species of mildew and its kindred species are regarded by all but the enthusiastic botanist who makes this abhorrence part of the science his particular study.

Returning again to the subject, I may say, that fresh horse-dung—that has neither been soaked in rain nor overheated—may be prepared by separating as much of the litters matter as can well be done, and the heap thrown up to heat a little; but as soon as it reaches a degree of warmth which is uncomfortable for the hand, it must be turned, and that process repeated almost every day for a few times, after which it will gradually subside in heat, and longer intervals between turning will suffice, until that moderate sweet heat be attained which is tolerably well known to the practical man; even the uninitiated may have a tolerably good knowledge of its ripeness for use, by the mild, steady warmth it furnishes. Now this state of preparation may be carried too far, and dung may be worked over and over until its heating qualities are entirely spent, so that when applied to the intended purposes, it is no longer able to command the warmth needed. I may observe, that in about the middle of its preparatory course the sheep dung may be added, and if it be done in any quantity exceeding one fourth of the whole, the increased heat abridged will require corresponding caution on the part of those having charge of it; and it must not in any case be used until it be subsided into that steady mellow warmth which is alike congenial to all around it, and lasting in its effects; even then, at this late period, beds made up ought to be in such a situation as to have the advantage of fire, or other heat, apart from their own; for though the mushroom would seem to relish the cold dews of autumn, when growing in the open air, yet when in an artificial condition, a certain amount of heat is requisite to bring a bed of it into good bearing; so that, after all, one of the principal secrets in the growing is to furnish it with that amount of heat calculated to stimulate it. Therefore, any beds that appear sluggish are often rendered productive by the application of fire-heat, heating the atmosphere, or, it may be, something in the way of dung linings, warming the bed, when the former is impracticable. But at this season, new beds made up must be kept up tolerably warm, and being spawned so, the heat ought not to be allowed to subside until the bed begins to bear. This course cannot always be followed, but may be partly so. If necessity compels the bed to be made out-of-doors, let it by all means have an amount of covering calculated to throw off all wet likely to fall; or, in fact, it ought to have some waterproof covering apart from the litter which forms its coating, and, if needed, hot dung must be applied to its sides.

Out-door beds are more extravagant in the quantity of dung they require than those on shelves, or in any sheltered in-door position; the extra bulk being wanted to maintain that amount of warmth, without which success is uncertain. The mode of making them is tolerably well known. A site being fixed on, which ought to be as dry as possible (under a large tree is not a bad place), and the length marked out, the dung is then spread over to the width of about four feet, which is trod firmly, and more added, building up the sides as you proceed, so that the bed be firm and even at the last; it will not settle much; so that if it be made at this season, and the dung has been previously well prepared, it may be spawned at once, and a covering of litter put over it, which, however, must be withdrawn if the heat increase so as to appear likely to be excessive; it is easy to ascertain this by sticking a stick or two in the bed, and examining them at times. Spawn must also be used with a more liberal hand now than earlier; and, if the moist warmth of the bed dampen the litter which covers it (which it is almost sure to do) this must be exchanged for drier covering. A very little degree of warmth is sufficient to start the spawn; but should it subside until scarce any exist, hot dung must be applied against one side of the bed, which, though it may kill the spawn it is in immediate contact with, it will most likely induce a good crop to present themselves on the opposite side. These means being adopted will, in most instances, increase a supply; but it is certainly more likely to be so when fire-heat is applied; and this may be done in many cases where there is no regular mushroom house. A vacant corner of space in the neighbourhood of the stock holes, where fires are kept on constantly in forcing operations, may be made into an excellent mushroom bed, in which case, or in those made on the shelves of a house set apart entirely for this duty, a much less quantity of dung is wanted. In fact, when

atmospheric warmth can be supplied, a bed a foot thick is sufficient. A good, but not severe beating or treading may also be given this, and the spawn scattered over it, or rather dibbled in, and the top coated over with an inch or so of good sound loam, is all that is wanted. Observe, the loam had better not be applied if any danger of over-heating exist, which, however, with well-prepared dung, can hardly be the case. Watering will, in a manner, depend on the dryness of the atmosphere, and other causes; but a dry, harsh air is inimical to the growth of this plant; and, if it needs must be so, this bed must be covered over with loose hay or litter, which must be frequently sprinkled with water. A heavy watering may, sometimes be given to an old exhausted bed with advantage, because, if accompanied by increased heat, a large second growth occasionally takes place—but, of course, this is not of long continuance; but, for many reasons, it is advisable to try to prevent finally condemning an old bed. Those now in bearing will need occasional watering only, for, in a rapid way, the moisture with which the dung has been charged with is sufficient for the support of the crop, until a later period, or until fire-heat or other cause has rendered watering necessary, of which it will itself give tokens. JOHN ROBSON.

SHANGHAI FOWLS.

AFTER reading the statements of "Gallus," concerning our pets, the Cochinchina fowls, will you allow me to give you a correct calculation of my own fowls. I have sixty Cochinchina pullets, and ten cockerels; fifty Dorking and Spanish. My fowls are fed from Indian corn, barley-meal, and wheat; they have as much as they can eat; and, during the experiment, were fed from my own hands; and, including every grain of corn, my pets have not cost me more than one-penny-farthing per week; my Dorking and Spanish cost two-pence; they were fed by a confidential servant; I can vouch for his calculations being correct. The weight of my largest Cochinchina cockerel is eleven pounds, the smallest six-and-a-half. I think, Mr. Editor, if you could see my beautiful pullet, Bessy, weighing eight-pounds-and-a-quarter, a pet of my husband's, you would not allow another word to be said against our friends! "Gallus" alludes to the eggs of the Cochinchina fowls being inferior to the Spanish. His taste for eggs must be very different from others. My friends say it is a great luxury to have a Cochinchina egg for breakfast. I feel inclined to think his birds are not pure, but I am not going to argue with "Gallus" about his birds; my object is to convince the readers of THE COTTAGE GARDENER, that Cochinchina fowls can be kept for one-penny-farthing per week each, and well. My fowls are kept in separate walks. I do not allow the Dorking and Spanish to molest my pets with their voracious appetites. We do not intend to keep any but Cochinchina fowls, as they are the most useful. AUGUSTA.

TO CORRESPONDENTS.

. We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of the Cottage Gardener, 3, Amen Corner, Paternoster Row, London."

ERROR.—In the advertisement of the *English Flower Garden*, in our number for December, it ought to have been stated, that it is embellished with a coloured figure of *Skimmia japonica*, and not of a *Skinneria*.

POTTED HYACINTHS (Wareham).—Your Hyacinths, "though not above an inch high, many of them are showing the flower-bud," and you take alarm. Your management, "keeping them in a dark closet for a month," was quite right, and you could not report more favourably if you had sat up to watch them, day and night since they were potted. They will be all right, unless the flowers begin to expand at the dwarf height you mention.

TAYLOR'S HIVES (An Old Subscriber).—The bars are half-an-inch thick, and the same throughout. The floor-board figured in THE COTTAGE GARDENER for February 13th, 1853, overhangs the sides of the box all round; three-quarters-of-an-inch. The length of opening, δ and ϵ , are three inches. The width of groove, α , two inches. Each box has its own top and floor-board, and the sash slides run between them. The top of each box is secured by three screws. The glass-panes are round, with flat tops, and may be had of Messrs. Neill & Co., one large, or two small ones, may be used.

GATHERING APPLES AND PEARS (An Irish Subscriber, Dublin).—Your enquiry about the proper time to gather Apples and Pears opens a very wide question, which may scarcely be settled in a few lines. The

old maxim was to be ruled by the colouring of the seed, and we are not aware of any safer guide. We believe that to be an indication, in general, of certain chemical changes having taken place, or being in progress, which constitute ripeness, and point in many fruits to their having attained keeping properties. But there are several exceptions, and as yet, we have all much to learn, doubtless, with all our experience. There are the *Easter Beurre* Pear, also the *Williams' Bon Chretien*, let them ripen on the tree and they are not worth eating. As a general rule, fruit should be easily removed when ready to gather. As to preservation afterwards, they require a cool, tolerably dry and dark situation, with a guarantee against frost; a constant temperature of 50°, would, doubtless, be capital. No fermentation may be thought of; no bruising or rough handling allowed.

FRUIT-TREES FOR CUMBERLAND (W. R.).—PEARS.—Beurre d'Amaulais, Dunmore, Williams' Bon Chretien, Muirfowl Egg, Althorpe Crasanne. We do not say those are certain to succeed, but we should try them. In your APPLES, why have you put American Newtown Pippin? Why! it has greater need of a south-wall than a Peach! Add Lamb Abbey Pearmain, Williams' Pippin, Fearn's Pippin, Mank's Codlin, and Beauty of Kent.

PHYSICAL EDULIS.—G. S. has obligingly sent as requested. He says—"The seeds keep best in the fruit. They have not ripened kindly this year, but if fully swollen in the autumn they ripen very well in-doors. To make the preserve worth eating, it is necessary to boil the fruit a very long time. When slightly cooked, as in a tart, they are not worth much."

DORKING FOWLS (G. E.).—No one knows that these "originally had a double or rose comb." We believe the contrary, and that all double combs are really malformations, however much they may be prized in some varieties. The fact you mention, that "double rose combs are extremely difficult to retain in the hens even of white Dorkings," supports our opinion. Any configuration retained with difficulty is not natural. We quite agree with you that single combs and double combs should be in separate classes.

HIGHEST PRICE OF A SHANGHAI COCKEREL.—We are informed that Mr. George sold his light cinnamon cockerel, at Birmingham, for £20.

VINES AND FLOWERS IN GREENHOUSE (A New Correspondent).—This can be done, though it requires much care to save the flowering plants from being drawn. If you buy our back numbers 92 and 127, you will find much information on the point.

FUCHSIA BUDDING (Piccola).—Do not disturb them. You may keep the soil damped, but must not commence fully watering them until you can move them into the light and warmth. The mildness of the season occasions their growth; in Hampshire, Fuchsias in the open ground are coming into leaf. Very weak guano-water will benefit your potted Hyacinths, but they will not bloom until next year.

FERT'S CUCUMBER.—Such a notice is an advertisement.

WORK ON POULTRY (Rhodon and A. M.).—The illustrations will I exactly what you require.

GREENHOUSE BUILDING (R. Bradbury).—We will readily insert description, but we must have full particulars, dimensions, &c. at "apparatus" did you put into the fire for heat? or water?

OYSTERS (G. Jones).—It is quite true that the valve of the Oyster is with the flat valve of the shell downwards.

BLOOMING CINERARIAS EARLY IN MARCH (Liebknauer).—These should be showing their flower-stalks now. Do not keep them rather warm with plenty of air, and give no more water than will just keep them from flagging. Forcing the bloom thus, however, will improve the healthy appearance of the foliage, but manure-water, after flowering-stalks are rising, will give you strong blooms.

NEW GREENHOUSE (W. E.).—The fresh damp walls will be nothing in your favour; but as you have flues, you need suffer nothing on that account. Put a small fire in the flue at first, and as gradually to dry and settle the matters used in its formation, and then get a good fire on, which will help to dry the walls of the house. Anything like plastering at present would be out of place, but you may wash with a solution of quick lime. After a day's firing you may introduce the plants. In dull weather for the first season put on a little fire, and give plenty of air, using no more water than will be necessary. Here you had better get your Geraniums, Fuchsias, and Verbenas, and even your Roses if you have room; though Roses and Fuchsias too will do very well in the cold pits along with Pinks and Carnations. For covering the fruit-wall outside of such a house, 2 ft. 4 in. from the ground, so as to be dry in summer, and green in winter, many things might be tried. In the south of the island you might try the broad-leaved Myrtle, and in the climate of London, the *Jas. honeysuckle*, trained lengthwise, would be a most interesting. In ordinary circumstances, *China roses*, well pruned every year, would be half evergreen in winter, and rich with flowers for pretty well nine months out of the twelve. We would recommend two dark ones, *Cramoisi superieur* and *Pavot*, and two white ones, *Mrs. Hume* and *Aimee Vibert*. For the bed in front of such a house, 2 ft. 4 in. broad, and 22 ft. long, have *Winter Scenillea*, *Crocuses*, *Snowdrops*, *Hepaticas*, *Tulips*, *Hyacinths*, and *Narcissus*, for winter and spring; and in May, fill with bedding plants, such as *Scarlet Geranium*, with an edging of *Mangle's Variegated*, or *Variegated Alysium*, or low-growing yellow *Calceolarias*, or *Lobelia Spicata*. This, however, is only one of many modes, as you will have already perceived from our pages. Any farther inquiries upon any specific subject will receive due attention. We dare not doubt you will soon realise the benefit of the observations you have made abroad.

LONDON: Printed by HARRY WOODBRIDGE, Winchester High-street, in the Parish of Saint Mary, Kildgaddar; and Published by WILLIAM SOMERVILLE OAK, at the Office, No. 3, Amen Corner, in the Parish of Christ Church, City of London.—January 13th, 1853.

THE COTTAGE GARDENER—ADVERTISEMENTS.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

Notice is hereby given, that the Annual General Meeting of the Members of this Institution will be held at the Horticultural Society's Rooms, No. 21, Regent Street, on Wednesday, the 19th of January, for the purpose of receiving the Accounts of the Charity for the past year, and Electing Officers for the ensuing year.

The Chair to be taken at one o'clock precisely.
E. R. CUTLER, Sec.,
Jan. 8, 1853. 97, Farringdon Street.

Lately published, price 6s 6d.

THE DOVECOTE AND THE AVIARY; being Sketches of the Natural History of Pigeons and other Domestic Birds in a Captive State; with Hints for their Management. By E. S. DIXON, M.A., Author of "Ornamental and Domestic Poultry."

"We have been reading Mr. Dixon's book upon the Dovecote and the Aviary. Our thoughts are full of guinea, curassows, cassowaries, emeus, and the like; it is good for our peace that we should let some of them fly."—*Household Words*, No. 120.

"Somewhat fastidious readers may, perhaps, imagine that a book of this kind must necessarily be dry and uninviting to all other parties than those for whose special benefit it is written. Such an assumption is very wide of the truth. The 'Dovecote' displays an amount of various reading and research, and an amplitude of illustration, of which we have no previous example in the catalogue of such publications."—*Midland Counties Herald*, July 22, 1852.

Second Notice.

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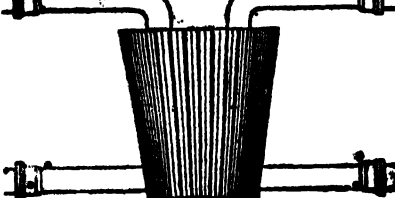
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"When Aristagoras, governor of Miletus, came to Sparta, to request assistance from Cleomenes, the king of that city, he brought with him a tablet of bronze, on which was engraved an outline of the earth, and whereon the circuits of seas and courses of rivers were traced. This work was probably the work of Hecataeus, the historian of the Asiatic city. It is the earliest effort of geographical delineation which we read of in the annals of Greece. Although rude and imperfect, it served the purpose of conveying to the mind of the spectator a general idea of the leading features of the countries which it portrayed, and was therefore thought worthy of being brought from Asia into Greece, and of being exhibited by an ambassador to a king.

"In this our geographical introduction to the present work, we shall endeavour to present to the reader a rapid sketch of the geography of Greece, similar in execution to the bronze tablet which Aristagoras put into the hands of Cleomenes. We shall attempt to exhibit to him, in a comprehensive and general outline, the form of its lands, and seas, and rivers. This difference, however, will be observed: we design to construct a map from a view of the country, rather than to communicate an idea of the country from the contemplation of a map."

The author now describes the spot he has chosen for his geographical survey, and, after pointing out the leading features which surround it, most appositely remarks:—

"It may reasonably be supposed, that, when Virgil conceived in his mind that noble and original picture, which he has presented to his readers, at the close of the fourth Georgic, of the subterranean grotto, in which all the rivers of the earth were born, and from which they issued, by hidden channels and silent courses, into every quarter of the globe, that the idea was suggested to his mind by this particular spot, in which, with respect to the continent of Greece, his poetical vision may be said to have been realized; and this conjecture derives support from the consideration, that the scene which he is thus describing is laid in Thessaly, and, indeed, at the source of the Peneus itself, one of the rivers which rises from this mountain-reservoir at our feet. The reader will also remember the use which our own poet, in the *Paradise Regained*, makes of the *roads* of Italy in his description of the city of Rome, from which they all start, and to which they all return. He will recollect how Milton sends, as it were, his thoughts from that spot, to travel by those routes to the most distant points of the Roman Empire—how, for instance, by the Æmilian Way, he penetrates, in imagination, into the forests of Germany, and traverses the British West; how he thence crosses to the Sarmatians, and beyond the Danube to the Tauric Pool: and how again, by the southern communication of the Arabian Way, he migrates downwards to Syene, and wanders eastward, to India and the Golden Chersonese. So it is with the Grecian traveller who stands on the point of which we have been speaking."

In a tour of this nature the reader cannot fail to derive both pleasure and instruction, of the highest and most enduring quality.

The volume is richly illustrated with twenty-eight highly-finished Line Engravings on Steel, and with upwards of three hundred and fifty Vignettes on Wood, which vividly impress on the mind of the reader the most interesting and instructive features of the subject, and render the work one of the choicest issues of classical, typographical, and pictorial excellence.

In addition to these recommendations, the work is preceded by an *Outline of the Characteristics of Greek Art*, from the instructive designs of Mr. SCHARFF, whose illustrations of Horace gave almost a new feature to the work of the great Roman lyrist. It presents the earliest forms in Architecture, sculpture, and painting, as well as those of the most advanced and finished state of the Arts: A description accompanies the drawings, which renders them easily intelligible and instructive to the reader, and imparts a new interest to the general body of the work.

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THE COTTAGE GARDENER,

AND

COUNTRY GENTLEMAN'S COMPANION.

CONDUCTED BY GEORGE W. JOHNSON, ESQ.

No. 225.]

THURSDAY, JANUARY 20, 1853.

[PRICE 3d.]

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RENDLE & CO.,** Seed Merchants, Plymouth, have much pleasure in stating that they
have this season a fine and well-selected Stock of all kinds of Kitchen-garden and Flower Seeds,
in the best possible condition, harvested by themselves and by growers of high reputation.
In consequence of the unfavourable weather for ripening seeds during the past autumn, the
stocks of some sorts of seeds are very small, and the prices in the trade consequently much higher,
yet we shall not make any corresponding advance, but supply all kinds of Kitchen-garden and
Flower Seeds on the same terms as last year.
Our NEW SEED CATALOGUE is now ready, and can be had in exchange for one penny stamp.
It contains prices of every article, and will be found very useful to all who have gardens.

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Our Collections have given the greatest satisfaction to all who have received them; and we have
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England, Scotland, and Wales. Our Premises are also within five minutes' walk of the Great
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London, Falmouth, and most of the principal Ports in the Kingdom.

The Cape, Australian and Chinese Mail Packets leave this Port every Fortnight.

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that any deficiency in quantities, or inattention to orders, be immediately communicated to us.

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MESSRS. JESSOP offer EGGS of any of the above with great confidence, each variety being
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Sold by all Druggists; and at Professor Holloway's Establishment, 244, Strand, London.

HOME GROWN SEEDS. CARRIAGE FREE.

SUTTON'S COLLECTIONS OF GARDEN SEEDS.—The superior quality of our seeds is plainly testified by the numerous orders we are daily receiving from parties who have had them in previous seasons, very many of which contain remarks, such as the following:—

Extracts from Letters now before us, which may be seen at our Office. (The names of the writers may be known by post, if required.)

From Withycombe Rectory, Taunton, Nov. 15, 1853.—"I was so much pleased with the selection of Seeds sent by you, that I recommended two of my friends to take parcels from you."

From Darnhall, Eddleston, July 27, 1853.—"Lord E. begs to express his thanks to you and Sons a cheque for the amount of their account, and requests acknowledgment of it. The Seeds sent this season have given great satisfaction."

From Whitehill Farm, Stroud, March 26, 1853.—"I am more than satisfied with the assortment of Seeds you made for me, and with

the quantity which you sent; and I consider that I have done better by leaving the choice to you than selecting for myself."

From Brecon, Nov. 6, 1853.—"I beg to offer you my commendations of the Seeds you sent me the two last seasons; nothing could be more true or better."

From Broms Barn, Glasgow, Nov. 15, 1853.—"The Seeds received last season turned out admirably, all being of first-rate quality."

From Northam, Bideford, Oct. 2, 1853.—"I know two parties who want to get some good Seeds. I have recommended you, as I have proved them to be good the last two years."

The very best kinds of Seeds in cultivation may be obtained at 30 per cent. less than the prices charged in most parts of the kingdom, by ordering one of the under-mentioned "Complete Collections."

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| No. 1.—A Complete Collection of Garden Seeds, for One Year's Supply of a Large Garden; including 20 quarts of Peas, in the best eight sorts for succession; the best sorts of Broccoli, choicest Melons, Cucumbers, Lettuces, Cauliflowers, and every other sort of Vegetable required, and in full quantities. | £2 10 0 |
| No. 2.—A Complete Collection, in quantities proportionably reduced. | 1 10 0 |
| No. 3.—A Complete Collection, equally Choice Sorts. | 1 1 0 |
| No. 4.—A very Choice Assortment for a Small Garden. | 0 12 6 |

If some kinds of seeds are already possessed, purchasers are requested to name them, that increased quantities of others may be sent in lieu of them.

Early Orders are particularly requested, and will have the preference of scarce sorts.

A List of the Sorts and Quantities contained in the above Collections will be sent, post free, on receipt of One Penny Stamp.

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BASS AND BROWN have the pleasure to announce that their Seeds are now harvested in fine condition, and ready for sending out, which they beg to offer as under. Similar assortments of previous years having given such general satisfaction, they again offer them with the fullest confidence.

Vegetable Seeds in assortments. Full particulars of the assortments are given in the Catalogue.

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| Peas—20 choice, new, and best sorts, one quart of each, arranged for succession. | 14 0 |
| " 10 ditto, one quart of each. | 8 6 |
| Broccoli—10 finest sorts, one packet of each, for succession. | 4 6 |
| | 3 0 |

- | | |
|---|------|
| No. 1.—Collection of Vegetable Seeds, containing the 20 quarts of Peas, with each of the Broccoli, and all the other seeds in proportion, of the best and choicest sorts. | 50 0 |
| No. 2.—Collection in smaller quantities. | 30 0 |
| No. 3.—Ditto. | 20 0 |
| No. 4.—Ditto of esteemed kinds for small gardens. | 10 6 |

Our New Seed List for 1853, may now be had, which comprises the former part of our general Spring Catalogue, the whole of which will be ready early in January.

The Autumn Catalogue (supplied for three postage stamps) contains select new plants, Roses, Shrubs, Hardy, Herbaceous Plants, Fruit, Bulb, and Flower Roots, &c.

Post Office Orders payable to STEPHEN BROWN. Remittances requested from unknown correspondents.

ESTABLISHED NEARLY HALF A CENTURY.

GENUINE SEEDS, &c.—JOSEPH HENRY KNIGHT, Seedsman, &c.,

Battle, Sussex, begs to return his best thanks to his numerous patrons for their kind support throughout the past year, and hopes, by prompt attention and care, to merit and secure the same for the future. His stock of seeds for the present year has been selected from the best stocks, and saved with particular care. He would beg leave particularly to call attention to the following Collections of Vegetable Seeds, selected in quantities and in sorts, including the newest and most approved sorts for One Year's supply, with particular attention to succession crops.

- | | |
|--|---------|
| No. 1. Selected for a garden of an acre in extent. | £1 10 6 |
| No. 2. Selected for a garden of half-an-acre in extent. | 0 15 6 |
| No. 3. Selection of the newest kinds, confidently recommended for an amateur's garden. | 0 10 6 |
| No. 4. Selection for a garden of a quarter-of-an-acre. | 0 10 0 |

From the number of Collections sent out during the last season, and the many testimonials of approval he has received, he feels confident the above will give general satisfaction. Each kind included in the above Collections will be fully described, and marked with the best time for sowing, &c.

He would beg also to call attention to the following Collections of Hardy Annual Flower Seeds, in packets, with full descriptions, which can be sent post free. 100 most approved and handsome kinds, 7s; 50 ditto, 4s; 25 ditto, 3s 6d; 12 ditto, 1s 2d. Catalogues sent on application.

Kids, post free, Currants and Pistoles, of the very best kinds, including the newest. 12 kinds for 9s; 35 kinds, 15s.

Hardy Herbaceous Plants. 100 choice sorts, named, £1; 50 ditto, 15s; 25 ditto, 7s 6d. Hammer included.

All orders over 7s 6d sent free to London. Post-office Orders payable at Battle, in Sussex.

WEEKLY CALENDAR.

M W D D		JANUARY 20-26, 1853.		WEATHER NEAR LONDON IN 1851.				Sun	Sun	Moon	Moon's	Clock	Day of
				Barometer.	Thermo.	Wind.	Rain in In.	Rises.	Sets.	R. & S.	Age.	at Sun.	Year.
20	Th	Notonecta glauca; ponds.		29.700	—20.595	49—33	S.	05	57 a. 7	26 a. 6	3 37	11	20
21	F	Mun's declination, 16° 51' s.		29.687	—20.377	32—38	S.W.	26	56	28	4 44	12	21
22	S	Early Moth; hedges.		29.396	—20.303	47—31	S.W.	—	53	30	5 49	13	22
23	Sun	SEPTUAGESIMA SUNDAY.		29.639	—20.423	46—30	S.W.	—	53	31	6 47	14	23
24	M	Bay-shouldered. Button Moth.		29.631	—20.559	48—34	S.W.	10	52	33	7 37	15	24
25	Tu	CONVERSION of St. PAUL.		29.615	—20.775	50—37	S.W.	16	51	35	rises.	12 45	25
26	W	Dromius linearis; bark.		30.073	—20.903	51—41	S.W.	—	49	36	6 a. 2.	27	26

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-six years, the average highest and lowest temperatures of these days are 45.5° and 33° respectively. The greatest heat, 85°, occurred on the 28th in 1846; and the lowest cold, 15°, on the 25th in 1837. During the period 91 days were fine, and on 91 rain fell.

BRITISH WILD FLOWERS.

POPPYWORTS.—PAPAVERACEÆ.

PAPAYER. POPPY.

Section II.—Poppies with smooth capsules.

(Continued from page 255.)

PAPAYER SOMNIFERUM: White, or Opium Poppy.



Description.—It is an annual. *Stem* from three to five feet high, smooth, but often hairy near the top, erect, branched, milky-green, leafy. *Leaves* large, grayish, wavy, lobed, and bluntly notched, clasping the stem with their heart-shaped base. *Flowers* at the end of the branches, three or more inches broad; hanging down whilst enclosed in the calyx, but becoming erect before the flower opens. *Ovary* of two oval, grayish sepals, which drop off soon after the flower has opened. *Petals* four, large, roundish, bluish-white, with a broad violet spot at the base of each. *Capsule* or seed-vessel, from two to three inches in diameter, globular, smooth, flattened at the top and bottom, sometimes rather furrowed. *Stigma*, or crown, eight or more rayed, with a broad, thin, bent-down margin. *Seeds* white, oily, sweet, and eatable.

Places where found.—Sandy soil, in fertile places.

Time of flowering.—July.

History.—Its specific name, *somniferum*, or sleep-bringing, tells truly of its powers. There are many varieties of it in our gardens differing in being double and semi-double; and in the varied colours of the petals. One, and, perhaps, a more permanent variety has black seed, which is used as a food for cage birds, and is commonly called "Maw-seed."

From this species is obtained opium, that drug so beneficent as a medicine, and so ruinous as an intoxicant. "It

is indeed," says Dr. Drummond, "an agent which can, for a period at least,

Raise out the written troubles of the brain,
And, with a sweet oblique antidote,
Cleanse the full bosom of that perilous stuff,
Which weighs upon the heart."

But this is only for a time, and the charm being dissolved, the soul awakes from its trance only to experience aggravated woe, in those at least (and even in Britain the number is not small), who have fallen into the habitual use of this drug. If there be on earth a misery that approaches what we might be allowed to conceive as among the worst sufferings of a future place of punishment, it is the state of an Opium-eater, after the action of his dose has subsided: Unhappy and trembling, his head confused, and his stomach sick, remorse at his heart, but his resolution too feeble to attempt a reformation; feeling as an outcast from every thing that is good or great, he returns despairing to a repetition of his dose, and every repetition adds confirmation to the evil habit. His constitution becomes exhausted in a few years; he grows prematurely old, and dies of palsy, dropsy, or some disease as fatal: he dies, having by his own weakness and imprudence lived a life of wretchedness in this world, and looking forward at his exit to the darkest scenes of misery in the next. How often does man turn the greatest blessings into the greatest curse!"

Many attempts have been made in this country to obtain opium from the capsules of this species, and Mr. Hall obtained a premium from the Society of Arts for specimens of British opium, in no respect inferior to the best eastern opium. Mr. Young, a respectable surgeon in Edinburgh, has also obtained it of excellent quality and in considerable quantity. But we apprehend the climate, besides the destruction by insects, is an insuperable obstacle to its becoming a profitable branch of horticulture in Britain. It was very early cultivated in Greece, perhaps at first solely for the sake of its seed, which was used as food. It is extensively cultivated in most of the states of Europe in the present age, not only on account of the opium, for which it is reared in Turkey, Persia, and India, but also on account of the capsules and of the bland oil obtained from the seeds. All the parts of the poppy abound in a narcotic milky juice, which is partially extracted, together with a considerable quantity of mullage by decoction. The liquor is strongly pressed out, suffered to settle, clarified with white of eggs, and being evaporated to a due consistence, yields about one-fifth or one-sixth of the weight of the heads of extract, which possesses the virtues of opium in a very inferior degree, and does not come to this country unless when used to adulterate the genuine opium. The heads are gathered as they ripen, and as this happens at different times, there are annually three or four gatherings. They are brought to market in bags, each containing about 3000 heads, and sold to the druggists. The London market is chiefly supplied from Mitcham, in Surrey. The heads or capsules possess anodyne properties; they are chiefly employed boiled in water, as fomentations to inflamed and ulcerated surfaces, and the syrup prepared from their boiled-down decoction is used as an anodyne for children, and to allay tickling coughs. A strong decoction of the dried heads, mixed with as much sugar as is sufficient to reduce it to the consistence of a syrup, becomes fit for keeping in a liquid form, and is the only official preparation of the poppy. It is, however, a very unequal preparation, as the real quantity of opium it contains is very un-

certain; as a medicine, it is by no means equal to ~~symp~~, to which a certain quantity of solution of opium is added. The seeds of the poppy are simply emulsive, and contain none of the narcotic principle. They yield a considerable quantity of oil by expression.

The milky juice of the poppy in its more perfect state, which is the case in warm climates only, is extracted by incisions made in the capsules and evaporated; and in this state forms the opium of commerce. The mode of obtaining it seems to have been nearly the same in the time of Dioscorides, as is at this day adopted. The plants, during their growth, are carefully watered and manured, the watering being more profuse as the period of flowering approaches, and until the capsules are half grown, when it is discontinued, and the collection of the opium commences. At sunset, longitudinal incisions are made upon each half-ripe capsule, passing below upwards and not penetrating to the internal cavity. The night dew favours the exudation of the juice, which is collected in the morning by women and children, who scrape it from off the wounds with a small iron scoop, and deposit the whole in an earthen pot, where it is worked by wooden spatules in the sunshine, until it attains a considerable degree of thickness. It is then formed by the hand into cakes which are laid in earthen basins to be further dried, when it is covered over with poppy or tobacco leaves. Such is the mode followed in India, and according to Kempter's account, nearly the same is practised in Persia; and when the juice is drawn in a similar manner in this country, and dried, it has all the characters of pure opium.

The Turks call opium *afioni*, and in the *teriakihana* or opium shops of Constantinople they take it in graduated doses from ten grains to 100 grains in a day. It is mixed with rich syrup and the dried juices of fruit to render it more palatable and less intoxicating, and is taken with a spoon or made up into lozenges, stamped with the words *Mash Allah*, literally meaning "The work of God." The Tartar couriers, who travel great distances, and with astonishing rapidity, take nothing else to support them during their journey. There is, however, some reason to suppose that the *Mash Allah* or *Mashash* of the Turks contains other narcotics, as those of *Hemp*, and *Lodium temulentum*, as well as opium.

The use of opium for the purpose of exhilarating the spirits has long been known in Turkey, Syria, and China,

and of late years it has been unfortunately adopted by many, particularly females, in this country. Russell says that in Syria, when combined with spices and other aromatics, he has known it taken to the amount of three drachms in twenty-four hours. Its habitual use cannot be too much reprobated. It impairs the digestive organs, consequently the vigour of the whole body, and destroys also gradually the mental energies. The effects of opium on those addicted to its use, says Russell, are at first obstinate constipations, succeeded by diarrhoea and flatulence, with the loss of appetite and a sallow appearance. The memories of those who take it soon fail, they become prematurely old, and then sink into the grave objects of scorn and pity. Mustapha Shatoor, an opium-eater in Smyrna, took daily three drachms of crude opium. The visible effects at the time were the sparkling of his eyes, and great exhilaration of spirits. He found the desire of increasing his dose growing upon him. He seemed twenty years older than he really was; his complexion was very sallow, his legs small, his gums eaten away, and his teeth laid bare to the sockets. He could not rise without swallowing half a drachm of opium.

Ever since the time of Paracelsus various preparations of opium have been commonly employed by medical practitioners. That physician and alchemist gave it both in pills and in a liquid state. The preparation of the latter he named *laudanum*, but kept its mode of preparation among his other secrets. The compounding of laudanum was first made public by Dr. John Hartmann, in 1634.

It must not be supposed that the active effects of opium are produced by one of its constituents only. So far from this being the case, besides containing meconic acid, caoutchouc or Indian-rubber, baccarin, resin, and meconates of lime and magnesia, it combines within its mass six peculiar ingredients, namely—Narcotiana, Morphina, Meconin, Narceina, Codeina, and Thebaina.

Narcotiana has been given in doses of sixty grains, without injury. *Morphina*, combined with an acid, is very active, one-fourth of a grain producing all the sedative effects of a large dose of opium. Of the medical properties of *Meconin*, *Thebaina*, and *Narceina*, we know very little; but *Codeina*, administered in doses of from four to six grains, produces excitement similar to drunkenness, but followed by depression and nausea. (Martyn, Smith, Withering, Donn, Duncan, Thomson.)

SINCE the establishment of THE COTTAGE GARDENER, every topic, we believe, connected with out-door matters, whether the useful or ornamental, has received attention, with the exception of landscape gardening, especially as applicable to moderate-sized grounds. We propose, therefore, to give a series of papers on this subject, and, to make them practically useful, it will be well to take the subject in its natural divisions, such as the approach walks, shrubberies, shrub masses, trees, water, rocks, &c.; and if we succeed in handling these in a proper way, we may serve to assist the owners of villas, &c., in determining the chief features of their grounds. To throw such materials into a whole, which we shall present in separate fragments, will be left to our great professionals, whose province we shall not dare to invade.

1st. APPROACH.—We may here observe, that the villa approach is by no means confined to the same style as the country mansion, with its extensive park, or grounds; indeed, it cannot be, neither extent nor local circumstances would warrant such a procedure. The park approach will, for the most part, wind its way through existing groups of huge timber trees, whilst the villa approach must, in the main, be supported by

groups of evergreens. There are several reasons why such should be the case, but the most cogent are the severe limitation of space, and the absolute necessity for a style of planting which will afford privacy and seclusion—such buildings being generally contiguous to towns or public roads. Having premised thus much, we will just glance at the park approach; this, however, does not concern the majority of our readers, and we shall speedily dismiss it.

The position of the entrance lodge, or gates, must be chiefly determined by convenience, such as the principal roads, railways, &c.; and it sometimes becomes necessary to have subordinate approaches as matters of convenience; these, however, are to be avoided, as tending to break up upon unity of expression and seclusion—two great principles never to be forgotten. The style of the lodges, gates, and their appendages, are generally dictated by the style of the mansion. This rule is, nevertheless, sometimes departed from when the approach is very long, and the locality of very peculiar character.

And now for the direction of the approach. It is a maxim with our best landscape gardeners to avoid all circuitous routes, unless fairly justified by the existence

of such objects as trees, sudden acclivities of ground, or other important interruptions; the whole line should appear, in fact, a common-sense affair, no departure without an obvious reason. We do not dispute the beauty of a bold course in preference to one so very tame that it looks like a would-be-straight line, attempted by a bungler; but all attempts this way should be made with extreme caution.

After entering the demesne, at, as near as can be obtained, a right angle, it may, generally, with the exception of a necessitous sweep or two, bend gradually towards the mansion, and should, by all means, if it can be contrived, ascend from the lodge: this gives an air of importance to the mansion, which a secondary line cannot impart. In its progress it should by no means pass any offices; this detracts sadly from the dignity of the whole. A well-conceived plan of mansion and approach, taken conjointly, will place the lodge entrance on the north side, or some point ranging between it and east or west; and, by this arrangement, the visitors obtain altogether fresh views of picked scenery from the drawing-room, and other principal windows, which are generally in the southern side. Good, bold vistas are, of course, not only admissible but desirable in the approach; but care must be taken that the first view of the mansion is at an imposing point, and that the approach is obviously tending towards it.

Such, in the main, are the principles applied to the approach; but it is evident that, since no two approaches can be exactly alike as to local circumstances, much modification of these principles must ever take place. There is nothing like being ruled by the natural impress of the place in these matters, at least, so far as not to infringe on leading principles. It is a common practice to throw the lodge gate into a deep recess; a plan that cannot be too highly commended, as imparting an air of dignity and freedom to the entrance, and thus giving it a degree of importance the more suburban villa cannot at all times command. One great fault we have frequently noticed—at least, such it appears to us—and that is, the want of a little more massiveness in the gates and appendages. It is certainly not a general fault, but one which deserves pointing to. Of course, such massiveness must bear a due relation to the bulk and style of the lodge, with its appendages, and the two jointly to the capacity of the interior, together with the mansion style. It need hardly be repeated here, that no portion of the dress grounds should be exhibited from the approach; such should be studiously concealed, for, could they be seen, it would at once lessen the interest that is ever felt by the stranger in guessing what the hidden portions of the domain might be. Besides, the picture would be contradictory in itself—a jumble.

In speaking here of a considerable amount of what may be termed simplicity in the line of approach (or that feeling which is averse to affectation and laboured attempts at display, by means of manœuvres too artificial to be relished by persons of any pretensions to

taste), let it be observed, that where ground is of an undulated character, it is far better occasionally to bend to such natural features than pertinaciously to fight against them. To follow the latter when expensive cuttings become necessary; nor is expense the whole of the evil, for, when accomplished, it may one day be discovered that higher principles and less expensive proceedings have been set aside by works, costly, yet defective.

It is almost needless to add, that a liberal breadth of turning road must be allowed at the entrance door of the mansion.

Avenues are imposing arrangements when the approach is flat, and the general tone of the place bears the stamp of art; they are dignified approaches, but should be attempted with some consideration. It has been well stated, by some of our great landscape writers, that they divide the landscape; or, in other words, however agreeable or dignified in themselves, they destroy unity of design. E.

It no longer admits of any doubt that the days of exhibition at our Poultry Shows must be reduced in number, and we think in no instance should those days exceed two. We say *must*, because we are quite sure that no Committees composed of gentlemen anxious for the continued prosperity of their Society, and still more so for the safety of the valuable birds entrusted to their care, can, in defiance of the past year's experience, persist in the course they have pursued hitherto.

We have letters from many of the exhibitors, even from some of the most successful in taking prizes this year at Birmingham, all mourning over the condition of their birds which were there exhibited. One of those exhibitors, writing even as late as the 8th instant, more than three weeks since the termination of the Birmingham Show, says, "My birds went up last night to the Metropolitan Show, but my two Birmingham Spanish Cocks are both ill; *never having recovered that week*."

The Rev. T. Prater, writing from the neighbourhood of Bicester, says, "I am heartily glad to see your remarks respecting the time which specimens are kept confined at the various Poultry Shows. My birds sent to Birmingham, were, on the whole, confined ten days; and in one pen, purchased by me on the first day of the show, *one pullet died*. I hope you will not let the subject rest, as it is undoubted cruelty to the birds."

E. George, Esq., of the Rookery, Chaldon, Surrey, writes to us as follows:—

"In THE COTTAGE GARDENER of December 30, you state the highest price you know to have been given for Shanghai's, at the Birmingham Show, to be £25 for Mr. Punchard's pair, and £30 for four of Captain Hornby's. These would have been regarded as exorbitant prices a few months since, but a chicken, bred in March last, sold for a still higher price. A cockerel (in pen 384), entered as Miss George's, of Chaldon, Surrey, (it should have been, Mrs. George) was purchased by Mr. T. H. Fox, of Snow Hill, Lon-

don, for £21; and only on condition, that Mrs. George retained it till February to breed from.

"Now for the sequel, which with me, at least, is a fact that tells forcibly against the keeping Poultry confined in pens for so long a time, *that bird, although in perfect health when he left home, is since dead.* Fortunately for Mrs. G.'s credit, Mr. Fox had not taken him."

"May I here express a hope, and I believe it is that of most exhibitors, that the Metropolitan Show will, in future, be limited to a shorter duration. It will then, doubtless, possess attractions which none but a great Metropolitan Show can offer. As it is, many very fine birds will be 'born to blush unseen;' their owners preferring to keep them in modest retirement, rather than expose them to the gaze of admirers, and the risk of losing their beauty, health, and even life."

A clergyman in the South of England, who is sparing no expense in the endeavour to improve the breed of Shanghae Fowls, has thus written:—

"The manner in which you have lifted up your voice against two very great errors in the management of Poultry Exhibitions, entitles you to the praise of all, who, like myself, take a great interest in their success. They are errors of such magnitude that I am fearful that they will, unless remedied, be fatal to many a promising Association, and I therefore hope that you will not lose an opportunity of denouncing them as strongly as you have hitherto done. I need scarcely say, that I allude to the practice of appointing a dealer as judge, and to the length of time over which some of the leading shows extend."

"We all know what a common thing it is for a man to fancy his own stock vastly superior to that of his neighbours, and, indeed, of almost every one besides. The dealer has, in the first place, this weakness to contend against. Again, he has to stand well with customers whom he has supplied, as well as to maintain his reputation with a view to his future orders—points, surely, which, present temptations sufficient to disqualify any man for so responsible an office. I am quite sure that unless the practice be checked, the public will lose their confidence in the awards, and consequently their interest in the exhibitions."

"And now one word with regard to the number of days over which the leading exhibitions extend. Nothing can be more injudicious than this. There is a large and daily increasing number of fanciers, who would not mind sending some of their choice specimens for two or even three days, but whom all the prizes in the world would not tempt to submit their favourites to the wear and tear, and consequent injury of a seven days show. Indeed, we frequently see enough in one day to make us wish that we had never exhibited. How often may you hear a valuable bird addressed in some such words as these, '(Get up you lazy brute,' the speaker at the same time suiting the action to the word, and making no very gentle thrust with his umbrella or walking-stick at the poor creature's breast. I have reason to know that some of our most eminent breeders complain most loudly; and that two or three of them have declared that unless an alteration is made they will not again exhibit."

"It is alleged that the judges require much time to make their awards, and also, that the expenses are so heavy, that the Societies, for their own protection, are obliged to keep the birds longer than they could wish. Might not the first of these reasons be met by appointing many more judges? and I am quite sure that competent men in each class could easily be found, if dealers were excluded. And might not an appeal be made to exhibitors and lovers of poultry to increase their subscriptions, so as to make the Societies less dependent on the money taken at the doors? Many, I am sure, would gladly relinquish their prize-money, and many would readily double their subscriptions and entrance fees, if, by such a course, the shows could be shortened some two or three days."

In confirmation of the statement made by our cor-

respondent, we can say that we know that Captain Hornby, Mr. Sturgeon, Mr. Punchard, Mr. Peck, and some other extensive poultry breeders, are ready to pledge themselves not to exhibit unless the number of days of exhibition are curtailed. The three last were missed at the Metropolitan Show, and we have Mr. Gilbert's permission to state that he is opposed to such a lengthened period of exhibition. This, to some extent, is an assurance that this reform will be effected in the next Show of the Metropolitan Society.

COVENT GARDEN.

We are considerably gratified to find that our suggestions for the planting of fruit-trees in situations which are usually accorded to timber and ornamental trees have, in several instances which have come under our notice, met with high approval. The more the subject is studied, the more interesting it will become; and we have no doubt that in a few years, after the effect of such a system of planting has been properly appreciated, that it will become very general. There is, perhaps, no country in the world where the study and, consequently, the cultivation of fruits is more neglected than in our own. In America, they have in various states Pomological "Societies" and "Institutes," which meet as regularly as our Royal and Linnean Societies, and discuss pomological subjects. Several excellent works on the subject have issued from the press of that country, and are justly popular; and it is to America that we are indebted for some of the finest varieties of fruits. Of these, we have the *Seckel*, and many other Pears; the *Jefferson*, *Washington*, *Lawrence*, and numerous first-rate Plums; many very excellent Cherries; and numerous other subjects which are not known in this country, simply because there is no taste for, and no encouragement given to, the science. In Germany, too, it is a very popular study, as the numerous pomological societies and publications furnish ample evidence of. In France, it has a great measure of support, although, perhaps, not so great as in those countries already mentioned; but certainly far greater than in our own. And in Belgium it is found not unworthy of government patronage and support. Need it be wondered, then, that so little is known, when so little interest is manifested on the subject in this country? We trust the time is coming when the same vitality and energy will be exhibited as there was at the time when Mr. Knight and Mr. Sabine devoted so much of their attention to it. This study requires only to be known to be more highly appreciated. We intend to devote some attention to it as opportunity offers. We do not mean as regards the cultivation and management of fruit trees, for that is already ably treated of in a separate portion of this Journal; but rather to consider the kinds, qualities, distinctions, and adaptations of the different varieties of fruit either already in cultivation, or which ought to be in cultivation in this country. The popular taste generally runs on a few old-fashioned sorts, regarding not those which are of more recent introduction, and

infinitely superior. There may be some excuse for this, there having been, of late years, so much disappointment experienced by false characters and recommendations accompanying new varieties, as to render cultivators credulous, and giving them reason to pause before they plant any varieties of which they have not some personal knowledge.

Next week we shall speak of such fruits as are adapted for planting against walls on different aspects and situations, and, in doing so, we shall treat more particularly of Pears. We have seen many instances where—in the north particularly—these can be cultivated with much greater advantage against walls than Peaches, Nectarines, or Apricots, and without one-half of the trouble or risk, which attend these sorts of fruits.

During the week the trade of Covent Garden has been unusually dull, more so than it has been at this season before; and this is attributable entirely to the state of the weather. VEGETABLES have been very abundant. *Cabbages* and *Savoy* make from 10d. to 1s. per dozen. *Greens*, 2s. per dozen bunches. *Celery*, 6d. to 9d. per bundle. *Broccoli*, 6s. per dozen bunches. *Onions*, 2s. 6d. to 3s. per bushel. There is a good supply of forced *Rhubarb*, at 2s. per bundle. *Sea-kale*, 1s. to 1s. 6d. per basket of about ten stalks. Several parcels of *Asparagus* have also been offered, but it is very small and weak. *Potatoes* are a dull sale, but still maintain good prices—say from £5 to £7 per ton. In fruit we have nothing new, and the price continues the same—1s. to 6s. per bushel for kitchen APPLES, and 6s. to 10s. for dessert sorts. Of PEARS there is nothing new besides what were enumerated last week. *Flowers* and *Plants* are also of the same descriptions as we mentioned in our last report. II.

GOSSIP.

A SECOND edition of Mr. Rivers' pamphlet on *The Orchard House, or the Cultivation of Fruit Trees in Pots under Glass*, is just published. It contains an appendix, entitled "The Experience of 1852." In this appendix Mr. Rivers states that his orchard-house has fulfilled all his expectations. He warns those employing such a structure not to have vines trained against the roof, as the full unshaded light is one of the requisites for obtaining well-flavoured fruit; and we will conclude our notice of this work, which is so promotive of "glass for the million," with this extract:—

"With regard to air: as soon as peaches begin to colour, if the weather be hot and sultry, all the shutters should be kept open night and day; and if it be even cold and windy, they should be always partially open. I believe but few, very few, even good gardeners have the courage to give sufficient air to vineyards and other glass erections; so that grapes are often colourless and flavourless, owing more to the want of air than anything else. In one of my vineyards, the past season, I had a nice crop of Hambro' grapes. When they commenced to colour, mildew, as with many of my neighbours, made its appearance on a few bunches. All the shutters, back and front—it must be recollected that I have no sliding lights; all my roofs are fixed, and are given, back and front; the old-fashioned lights, slid down as usual, would admit rain—were immediately opened, and kept open,

night and day, till the grapes were ripe. They were then closed at night, and opened in hot sunshine, so as to keep the house airy, warm, and dry. The grapes were perfect in colour and flavour, and their skins were so tender as to nearly melt in the mouth. No fire-heat was employed; all was done by sun and air."

"In the orchard-house culture of peaches and nectarines syringing must play an important part; for the red spider is so fond of their leaves, that, like Sindbad's Old Man of the Sea, he will stick closely, and cannot be dislodged without applying the syringe close to the under surface of the leaves. If this pest be suffered to make the least progress, the flavour of the fruit will be entirely destroyed. A small microscope, in the hands of the amateur, will be the best instrument to discern it; looking closely at the under surface of the leaves, if it be there, a small bright red speck, like a red grain of sand, will be seen. The experienced gardener does not look for them. One glance at the upper surface of those leaves, which show some minute yellowish specks, is quite enough for him. If, therefore, the least sign be apparent, continue the regular syringing, even till the fruit is ripe; otherwise, syringing may be discontinued when the peaches and nectarines commence to soften, preparatory to ripening.

"Trees that have been from four to seven years in pots will require water daily in summer, as the pots become full of roots, and absorb a large quantity of water. Lifting the trees more than once during the summer, as mentioned in the treatment of those at Hyde Hall, will be found quite necessary. They become by this treatment sturdy as oaks. Those at Hyde Hall, adverted to below, are at this moment (November, 1852) the most robust and fruitful bushes I ever saw.

"I was reminded of my orchard-house trees in a recent visit to Versailles. I there saw, as I daresay many of my readers also have seen, hundreds of orange trees centuries old, kept in tubs, and confined to a very small quantity of earth as compared with their bulk, and not shifted for many many years; they are all in full health and vigour. How are they nourished? Simply by top-dressings annually of manure, and occasionally liquid manure. If, then, an orange tree can be thus kept in health and vigour in a tub for centuries, surely a peach tree, in a pot, receiving nourishment above and below, can be sustained so as to give fruit for ten or twelve years. This is mentioned because I once heard a really clever gardener say, "Oh, it is impossible to keep trees in health in pots!"

"I have found from the experience of the past season that peaches, nectarines, figs, and grapes, will not ripen in those houses, with hedges for walls, referred to in page 9. Apricots, plums, cherries, and pears will succeed well; the three latter even better than in houses with walls either of wood or brick."

The first week of the month included two sales of very superior *Shanghai* fowls. On the 4th, Mr. Stevens disposed of Mr. Punchard's superfluous cockerels and pullets, amounting to 183 birds, which were sold in 170 lots, realising just over £488. The highest price given for a cockerel was £10 10s.; and the highest for a pullet 7s. The sale was very numerously attended by amateurs as well as dealers, from Bristol, Birmingham, Farnmouth, and elsewhere. The healthy and good condition of the birds was the subject of general remark.

The other sale, January 5th, was of Mrs. Herbert's *White*, *Buff*, and *Black Shanghai*. These were sold by Mr. Strafford.

Mrs. Herbert has sold privately, before she thought of a sale, nearly £300 of birds. One pullet she sold for £20, or guineas. Had she fortunately kept those, and not put so low a figure on her other pen at Birmingham, which was immediately sold for 20 guineas, the sale would have been still more extraordinary. There were 110 birds, and they realized £309 4s. 6d.

The white birds (much the best specimens) averaged £3 18s. 9d. each; the Buffs, an indifferent lot, £1 3s. 10d.; and the Blacks, £3 5s. 6d. Mr. Stafford's arrangements were excellent.

It is determined to have this year a *Cheltenham Summer Exhibition of Poultry*, and the days fixed upon are the 1st and 2nd of June. The secretaries are Messrs. Jessop, Brothers, Nurserymen and Poultry Fanciers, Cheltenham.

We are very glad to be informed that the government of Belgium have appointed commissioners to obtain reliable evidence as to the merits and best modes of cultivating the various species of *fruits and their varieties*. The commissioners are eight Belgian gentlemen, but corresponding members in other countries are connected with them; those for England being Mr. Rivers, of Sawbridgeworth, and Mr. R. Thompson, of the Horticultural Society's Garden at Chiswick. The results of their inquiries are to appear in parts, at an annual charge of 24 or 36 francs, according to the quality of the paper, &c. Each part is to contain four coloured plates, and the requisite amount of description and detail. It holds out a promise of settling many disputed points in fruit-culture, and removing a mass of misapprehension by determining synonyms.

As the present winter, by its wetness, has absolutely prevented *Wheat-sowing* in many districts, it deserves notice that *Talarera Wheat* has for many years been sown in the midland and southern districts of England as late as the end of February, and the produce well housed in September. It yields quite as good an average of grain as any other variety, and more flour is obtained from it than from most other varieties.

We have recently met with a very amusing and intelligent little volume, entitled *Walks after Wild Flowers*, by Richard Dowden. The following extract, giving the derivation of the word *Mustard*, is by no means the only spicy specimen we could give from its pages:—

"*Mustum ardens* is 'burning hot vinegar.' There was always in the world's surgical practice some method of counter-irritation; St. John Long's proceedings were not an original idolatry, but an aggravated revival of ancient practices, for we find that there was an old cure made with boiling vinegar, or wine—for both were called *must*—and adding to these the powder of *sinapis* made the *mustum ardens*. It was applied as a cataplasm when boiling hot, and it was often a cure, no doubt; but at times its only effect was to 'scald poor wretches.' This eschariotic was, in a milder form, diverted from the outside to the inside of the body, and was taken by flapdragon-drinkers, and other fire-eaters, as a dram; of course the vinegar decreased, and the wine and ardent spirits increased, in this *mustum ardens*. At length, however, it settled down into our table mustard, and was eaten, as Tusser tells us, with everything:

'Brawn, pudding, and souce,
And good mustard with all.'

To this day some housekeepers make their mustard with vinegar; and the common dressing for cold and watery salads—the *sulfuric acid* of old cookery—is mustard, salt, and vinegar."

The following is a list of the *Poultry Shows* of which we are at present aware. We shall be obliged by any

of our readers sending us additions to the list, and giving the address of the Secretaries.

DONCASTER, January 21st. (Sec. H. Moore, Esq.)

REIGATE, February 1st and 2nd. (Sec. J. Richardson, Esq.)

GENERAL PRINCIPLES OF FORCING.

It may seem strange to those unacquainted with forcing matters to think of taking at one swoop, Vines, Peaches, and other forcing fruits, and dealing out advice applicable to them all. Yet, a little generalising is not amiss now and then, for it will assist the novice in so grouping his matters as to economise in regard of both fuel and labour, as well as to fix in his mind, in distinct characters, the necessity of observing certain laws, which at all times affect the well-being of fruits under the forcing process.

Now, the great principle which, under trifling modifications, concern all forcing, are the following:—*Light*, *Heat*, *Atmospheric Moisture*, and *Ventilation*. These are placed purposely in a just sequence, according to our ideas; for a due amount of light justifies the application of heat in the forcing sense of that term; this done, a necessity arises for a given amount of atmospheric moisture; and as this kind of artificial excitement continues, a slight contamination or vitiation of the enclosed air of the forcing-house takes place; hence the necessity for ventilation, which, in the main, may be said to be caused by heat, and this brings all the rest into action. This is manifest from the fact, that cold frames, or pits, in winter, if dry, may remain closed for days without injury.

Light, then, would appear to be the chief mover of the whole affair, as concerns the forcing gardener; and we will point to its bearing in practice. To light it is we owe, in the main, the necessary solidification, or ripening, of the parts of our plants or trees; in other words, the maturing of their structure; also, the digestion of the sap; and lastly, the colouring matter is almost entirely dependent on the light, as witness the process of blanching, which takes place in our Sea-kale, Mushrooms, Asparagus, &c., when purposely deprived of light. If this, then, be the prime moving power of the forcer's machinery, how essential is it that the gardening student's mind should be duly impressed with its importance in the very outset of his practice. It may here very naturally be asked, what is to be done practically, since we cannot make light? True enough, indeed, or man would soon disturb the order of the seasons. But some things the forcer *can do*; in the first place, secure clean glass to his structures; in the second, objects requiring a great amount of light placed very near the glass; and thirdly, a negative bearing of the subject—he can reduce the stimulus of heat in the comparative absence of light. Added to this, he can, by training and thinning processes, secure that what leaves are retained may get the full influence of the light.

And now for *Heat*; for without this, in a certain ratio, all the light imaginable would be inadequate to the purposes of vegetation. Of course, this is a matter of degree; we speak of it here in reference to its power of exciting vegetation; and in order to accomplish this, it must, in the main, be above the freezing point, even with respect to plants from our coldest mountains. As to the forcing gardener's subjects, there are few will be excited by warmth in any very sensible degree, until the thermometer has attained the point known as "temperate," or 55°. However, the application and increase of heat practically requires much consideration. To theorise on heat is not enough; a man should be thoroughly conversant with the habits of his subject in

their native conditions; this, added to a scientific consideration of the properties of heat, constitutes any man a first-rate forcer, provided he has the proper means to carry out his views. This be the maxim, then, with young forcers; in no case use extra appliances of heat irrespective of the amount of light. As for night-heats in our forcing-houses, we are persuaded that a diminished amount, generally speaking, would be beneficial.

Orchids are said to be tender things. We have a house containing both eastern and western genera, the temperature by night of which, for the last three weeks, has not averaged above 50°, and yet the plants look hearty, or rather robust. But they have had a roof-covering nightly, and thus very slow firing sufficed. This question of roof-covering has a kindred bearing on this portion of our remarks; we have little doubt the time will arrive when they will, on all sides, be deemed a necessary appendage of glazed structures; indeed, their utility is already recognised by most of our first-rate gardeners, the only thing that remains is to provide a material of general application.

Atmospheric Moisture is our next consideration; and the very mention of this brings to our mind the mummy plants of our childhood, when crowded shelves of half-dried specimen plants might be seen in first-rate establishments, the red spider, mealy bug, &c., rejoicing in a congenial element, and, doubtless, marvelling at finding that so far from their native home, foreigners of Man should share such amazing sympathies for their sustenance and preservation. In those fine old days there was none of your gimcrack dished-tiles, flanged-pipes, and evaporating-pans; these are all innovations; floors were white, walls were dry, and not a dew-drop or a pearly spangle to be seen! The hothouse would have made a capital bed-room; however, the spiders and the bugs have the worst of it now, scarcely a soul can be found to patronise them.

Joking aside, these were serious matters; humanity is a fine thing, and so is sympathy; but in these days it begins at home. How they managed in those days to please the cook and the table-decker, it is now difficult to imagine. But how altered! Now, where is the hothouse of any repute that has a heating apparatus without a provision for atmospheric moisture? To come, however, to principles—without a due amount of this necessary element, the tax on the foliage of plants, in the form of perspiration, is too great at times to enable the plant, or tree, to present that degree of vigour which is at once the testimony of robust health, and the precursor of fruit or flowers. If any one cannot comprehend this, let him read of the parched wilds of Africa; or, indeed, come nearer home, and enquire why Britain boasts so of her green fields and lawns, as compared with some of our continental neighbours. A too high degree of evaporation, without a corresponding degree of absorption by the foliage, necessarily tends to that condition, which may be termed, in a mild way, leanness; and, however it happen, is the very condition to prepare for the various insects which are the pests of vegetation, whether fruits or flowers.

Every structure, therefore, of whatever character, appointed to gardening matters, should possess a special arrangement for the production of atmospheric moisture: we would scarcely except our succulent tribes. Let it not be understood, however, that we would have our readers for ever tampering with damp atmospheres; whilst we thus write, we must deplores any rule without a principle. Even with the orchideaceous tribes, which revel in a warm and moist air, there are periods when even an almost dry atmosphere is beneficial for a few hours.

After all this sifting of principles, let us take a little fresh air; let us think about ventilation—that principle

so averse to what the gardener terms "drawing," for a drawn or over-lengthened plant is a sure evidence of mismanagement—of a debilitated constitution.

We remember well the time when men of scientific attainments fancied that practical men were altogether wrong about this giving of air, ventilation, or whatever else folks call it. But they were wrong: the practical men had, no doubt, been occasionally guilty of a sort of mannerism; but from this even what class of society is totally exempt? It assuredly is not worth while to open the cashes of a greenhouse to a tempest, or to what country-folk call a thin wind; but these are merely extravagancies. We say, ever endeavour to obtain a circulation in the confined, and, by consequence, stagnant air of your garden structures; if you must err let it be on the right side of nature. The great and marvellous world which we at present inhabit has, thanks to God, neither roof nor sides like a hothouse; and though the poor, untaught heathen may fancy a boundary in the ethereal blue overhead, we are assured that such bears the stamp of infinity.

After all this, let us caution our readers against the abuse of this principle. Giving air, and giving artificial heat, are each matters to be continually modified by existing circumstances; and such things make the life of a gardener one of continual watchfulness. It has been said that you can tell a gardener—a genuine "early York"—a mile off: so be it: so you may a ship captain, a lawyer, a chimney-sweep, and some other grades of society.

Our early cucumber man would, if he grow little else, doubtless, speedily condemn us as horticultural latitudinarians. What! he may say, let a north-easter blow on the first ridged plants in the end of February? We say no, by no means; and are aware that such a free advocacy of ventilation may, indeed, subject us to a little prejudice. This should not be.

To sum up the matter; light, heat, atmospheric moisture, and ventilation, are all powerful means to either good or bad ends in the hands of the cultivator. If he make an indiscreet use of them, that is, uses them irrespective of outward conditions, the fault is not ours. Here is the Scylla, there Charybdis, pray do not run your vessel against either.

R. ERRINGTON.

BULBS.

(Continued from page 215.)

BULBINE.—This is a very old-fashioned class of plants, which were very much sought after when the rage for herbaceous plants, or, indeed, any class of plants which promised a long array of hard names, was at its height; flowers were very little thought of then in comparison to the numerical strength of a "collection." The future historian of our days will have to record that we began to run into the opposite extreme early in the nineteenth century, and that we discarded a host of beautiful plants for no other reason than that we could not manage them, for bedding out, or for specimens for flower-beds, or the exhibition tables, until towards the middle of the century we began to perceive that the improvement of races could be pushed beyond the province of the mere florist. Even then, however, I fear we shall not have left much to raise the character of *Bulbines* or *Bulbinellas*. The only difference between *Bulbines* and *Anthoriums* is in the colour of the flowers, the former being yellow or yellowish, and the others white. On account of the succulency of their leaves, they might be supposed to be *Asphodels*, but all of them are true *Anthoriums*, and they require the same treatment, to be planted on a warm dry border of light sandy soil, and to be slightly protected in winter, which

is easily done, as the stalks and most of the leaves die down in the autumn. They are now very scarce, and can hardly be met with out of Botanic gardens. It is on record, that a great number of them were lost in the hard winter of 1740, which were never introduced a second time. I never saw but three or four kinds of them, and that many years ago. They are not bulbs, but tuberous-rooted.

CALIPHURIA HARTWEGIANA.—This is a handsome flower that has never been figured yet. It was "sent out," eight or nine years ago, by the Horticultural Society, who had it from Hartweg. It was discovered by him at a place called Guaduas, in New Grenada. Dr. Herbert called it *Hartwegiana*, and described it in the Botanical Register for December, 1844, from specimens sent to him from the Society's garden, where it flowered for the first time in March, 1844, along with the leaves. The flowers are green and white, and seven in the umbel or flower-head; the tube of the flower is greenish, and its lobes white, tinged with bluish. The leaves are petiolated, that is, broad above and tapering so much at the bottom as to become a footstalk, like a Funkia-leaf. It seems to be related to *Griffithia*, and to be treated exactly like the more hardy *Hippeastrums*, requiring strong loam, good stove heat after the flowers are over, so as to get the leaves ripened well before they die down. Naturally, it seems a winter grower, but it is not positively so, like *Amaryllis*. It can be made to grow and go to rest, just like a *Hippeastrum*, either in May or September, or, by degrees, it would begin to grow at almost any season. There have been many mistakes about this fine bulb. There are two plants in cultivation very different from each other, called *Hartwegii* and *Herbertii*. These two names are in the Botanical Register. The first and true name is in the body of the work, and *Herbertii* in the index; but there is only one bulb yet known in the genus. Dr. Herbert spells it *Caliphuria* (from *Kalos*), but in the "Vegetable Kingdom" it is *Calliphuria*, which we followed in the Dictionary. The bulbs increase readily by side off-sets.

CALOCHORTUS.—This is a genus of very beautiful bulbs, found on the north-west coast of North America, and on to California. It was named by Pursh, a Prussian botanist, who travelled in North America, and wrote a book on the plants he collected. The unfortunate Douglas was the next traveller who met with them, and he sent or brought over quantities of flowering bulbs of them to the Horticultural Society, by whom they were largely distributed to the Fellows. He also wrote a paper on the genus, which was read before the Society, and printed in their Transactions in 1828 (*Hort. Soc. Trans.*, vol. vii.). They are hardy, or all but hardy, and are true Lilyworts, occupying an intermediate position between the wild Tulips and the Fritillarias. The bulbs are solid, the leaves are strongly nerved, and the flowers of some of the species are large and very handsome. The southern limit of the race is in California, where they dwindle into mere dwarfs, and self-coloured flowers, such as the little yellow one which Hartweg met with in the valley of the Sacramento, and which is now in cultivation; but in his Journal he speaks of another of them, which he found in April, or early in May, but not just in flower. It was high up in the mountains, and not far from the snow, then melting down and watering the soil, where this *Calochortus* was in fine leaf. The last conversation I had with Mr. Hartweg was about this very bulb, and the whole genus, to see if I could trace out the cause why these beautiful bulbs had disappeared from cultivation. I flowered three of the best of them in pots, and while in the dry state; after that they died without any apparent cause. It was just the same all over the country, as far as I could learn; but I heard afterwards that Mr. Green, the great bulb-grower of Clapham, has succeeded with

them. Mr. Hartweg believes that none of them, but especially those discovered by Douglas in Oregon, or Colombia, should be grown in pots, but in peat borders, where they would be neither too wet nor too dry. My own opinion of them is, that we did not allow them sufficient time to ripen the leaves and bulbs, after flowering; that they are rather of the nature of *Tigridia* bulbs, and, like them, take a long time to ripen in our cold soil, and that, without being thoroughly ripe before they are allowed to go to rest, they will perish. Hartweg says, the little California species stand intense heat, and look perfectly green in the leaf after all the rest of the small herbage in these parts is scorched up.

CALOCHORTUS MACROCARPUS (Large-fruited) is one of the finest we know of them—a large, wide, open flower, chiefly of a rich purple colour.

CALOCHORTUS VENUSTUS is, perhaps, the next best of them. Its flowers are as large as those of *macrocarpus*; pure white in the upper parts, but the lower parts are clear creamy-yellow, and streaked with deep red marks, with a conspicuous spot at the bottom of each petal resembling a drop of blood. Altogether it is, a charming flower.

CALOCHORTUS SPLENDENS.—Equally beautiful, and more resembling *macrocarpus* than the last, being of a lilacy-purple, and having a small dark spot at the base of the petals.

CALOCHORTUS LUTEUS.—This is a Californian species, where it was found both by Douglas and Hartweg; and it flowers later with us than the rest—in September and October. The three sepals are green, and narrower than the petals; the latter are yellow at the points, and green below. In the middle is a yellow band of hairs, among which are seen deep spots of blood colour.

CALOCHORTUS NITIDUS (Showy).—This is a much smaller species than any of the rest, but we know little about it, except from Douglas's account of it in the Transactions of the Society already alluded to. The flowers are chiefly purplish. Douglas heard of another species, "a magnificent plant," growing about the "confluence of Oakenagon River," where the roots are gathered by the wild Indians, cooked, and devoured as they do their "quamash" roots (*Camassia esculenta*), another bulb belonging to a kindred section of the order.

CALOCHORTUS PALLIDUS.—This is a very small plant, a native of temperate regions in Mexico, whence it was introduced to Belgium in 1844. The flowers are pale yellow, on comparatively long footstalks, three or four of them forming the umbel. They appear at the end of summer, and, like all the family, the bulb goes to rest in the autumn. It will be in keeping with an allied genus called *Cyclobolium*.

CALOCHORTUS ELEGANS.—This is the *Chalochortus* of Pursh and Douglas, and the *Fritillaria barbata* of Kunth, also of our Dictionary, which is wrong, for it belongs to a kindred genus named by Sweet, which includes, as we shall soon see, several pretty little *Calochortus*-like flowers; but they all droop, or have nodding flowers, as the botanists say.

CALOSCORDIUM NERINEFLORUM.—This is a very dwarf bulb from China, with the leaves and habit of an *Allium*, and the flowers of the same purplish or pinky hue as the Guernsey Lily. It is hardy, or all but hardy, but so apt to be overlooked, if planted out by the side of an open border, that it is best to keep it always in a small pit, in any light sandy soil. *Hesperoscordium* is another form which these little garlic-like bulbs assume on the opposite shores of the Pacific, in the far west, and of which we shall remark when we get round to them.

CALLITHAUMA.—We missed this extraordinary genus of Peruvian bulbs in our Dictionary. But three distinct species of it were introduced to this country; the first, called *spatulatum*, by Richard Harris, Esq., of Liver-

pool; and the other two, *viridiflorum* and *angustifolium*, by Dr. Herbert, with whom they flowered in 1849-51; and there are figures of them in the Botanical Magazine (April, 1841). Ruiz and Pavon found *O. viridiflorum* plentiful in the woods of Huassahuasi, and in stony places of Palca, in Peru. They called it *Pancratium viridiflorum* in the "Flora Peruviana," having an enormous cup inside the flower. They represent the scape of this bulb six feet high, bearing four or five large flowers, "beautiful, entirely emerald green." Ruiz's dried specimens of "this marvellous plant" were lost by shipwreck. Those that flowered at Spofforth were only of ordinary size, and the narrow-leaved one seemed to be only a variety of the other; both of them green flowered.

O. spatulatum, was gathered some hundreds of miles from Truxillo, in Peru. It seemed to like more heat than the others. The flowers of this species are green, also, but it never flowered in England, and few could grow it except Dr. Herbert, who found it to thrive best in loam. The genus seems intermediate between *Ismene* and *Coburgia*. Dr. Lindley considers it a true *Ismene*; in fact, a green Peruvian Daffodil, which is not far from the mark.

Any of our young readers who would be content with a great name and a little fortune, have only to procure specimens of all the *Pancratium*-*Amaryllis* that I hope to touch upon in this series, grow them as I shall say, and cross them diligently until they disclose their real affinities, and fill our borders with the gayest flowers in the country.

Let us now see what *Pancratium*-like, or *Pancratium* *alias* *Pancratoid*, means, having thus incidentally mentioned the word. One who knew as much about one flower as another, could see no difference between a Lily and an *Amaryllis*; and there is a kind of Lily and a kind of *Amaryllis*, which, if a flower of each was gathered, and the "private mark" kept out of sight, there is not a man on earth who could tell, with certainty, which was the Lily, or which the *Amaryllis*; yet, by showing the *private mark*, a child could learn in two minutes to know any Lily from any *Amaryllis*, in any part of the world. The private mark is, that in all the lilyworts, the seed-pod is in the inside of the flower, at the bottom, as in the tulip. The *Amaryllids* have the seed-pod always on the outside of the flower, like a *Fuchsia*. In *Fuchsia microphylla*, the opening of the flower is only an eighth-of-an-inch from the end of the seed-pod or berry, whereas the opening of the flower of *Fuchsia corymbiflora* is four or five inches from the berry, and so it is with flowers of the *Amaryllids*; some have long tubes to the flowers. I shall mention one whose tube is more than ten inches long, and some have hardly any tube, and the rest have tubes of different lengths: still, it is easily seen whether the seeds are to be inside the flower or outside; and so, if it is a Lily or an *Amaryllid*. Now, besides this mark of distinction, the flowers of an *Amaryllid* take after three particular forms, each of which is as easy to know as the berry or pod-mark. The first form is called after the Daffodil, *Narcissiform*. A single Daffodil looks as if two flowers were grown into one; the inside one is called the cup, or coronet, and in olden times, the nectarium. This inside cup diminishes, in different kinds, until all that can be seen of it is a mere ring at the bottom; but whatever the length or the size of the cup, all the plants in the section have their stamens growing inside the cup, and free from it, so that you could cut away the flower and the cup without hurting the stamens. Every bulb in the world, with a cup inside the flower, or the mere rudiments of a cup, and having the stamens free from the cup, belongs to this Daffodil section. There never was a more simple thing to learn than this, except the next great section of *Amaryllids*, which also has a

cup inside the flower; and here, likewise, the cup takes different forms and sizes in different kinds, but still there is a cup, and to the inside of this cup all the stamens are fastened the whole way up, and at regular distances all round the flower. If you were to split a flower of this kind the stamens must come with it, and if you now tear off the flower itself, and keep the cup with its six stamens (they are almost always six), the thing would look like the foot of a duck, the stamens representing the toes, and the cup the web part of the foot. Then what is to hinder any one, who can distinguish a duck's foot from the hoof of an ass, from knowing to which of these two sections a flower belongs as soon as he sees it? This hoof is the same as the cup without the stamens, and the web-foot the cup with the stamens; the hoof is the Daffodil section, and the web-foot the *Pancratium* section. But the third and last section is even more simple than these two, for there is no cup at all; nothing but the outside flower (perianth) and six stamens, with the seed-pod outside the flower, as in the *Fuchsia*. This is called the *Amaryllis*-form section. All the bulbs in existence, if the seed-pod is on the outside of the flower, must belong to one of these three great divisions. Therefore it is most essential for young people "to learn this by heart." If the English people, who went over first to Peru, were to know these three simple things, or even two of them, they would have never fallen into such a glaring mistake as to call *Ismene*, the Peruvian Daffodil, because *Ismene* has the stamens joined to the cup, and a large cup it is too, and very wide in the mouth, so that they could see this difference with one eye. In these days, however, people would not be let off so easily; and in a few more years, if the world keeps going round so fast as it does now, depend upon it that any one going to a strange place, who could not explain, or talk about the simplest elements of the principal branches of Natural History, he or she would be set down as of low breeding, and would be talked of all over the place in more ways than one. Let us, therefore, this very season, begin with the Snowdrops, and not rest satisfied until we can tell the orders to which every bulb belongs which comes in our way in flower.

D. BEATON.

HARDY STOVE PLANTS, THAT WILL DECORATE A WARM GREENHOUSE IN WINTER AND SPRING.

MANY of our subscribers have a small house, near their mansion, appropriated to plants, and which, for the purpose of securing winter bloom, and their own personal comfort, they kept at a temperature at night ranging from 45° to 50°, with an increase of 10° or 15° during the day, when a bright sun shines. Many, besides this desideratum, even if not possessed of a regular plant-stove, have a forcing-house, hotbeds, or pits, where, with a little scheming, a higher temperature can be obtained, in spring and autumn, than in a greenhouse where a general collection is growing and blooming. To suit their case, so far as to enable them to have the greatest quantity of bloom in one place, will be the aim of the present paper, even though we should be obliged to refer to plants that have hitherto received rather marked attention from us.

Though a high temperature and a moist atmosphere are essential to the growth of most plants from warm latitudes, it is a mistake to suppose that they can only be seen in bloom under similar circumstances. Many of them may be so managed as to induce them to bloom in summer; and then, while some require house treatment, many others will bloom freely out-of-door. Others that will not bloom in winter, will stand longer in such a house as I have indicated

above than in a plant-stove; while the gardener will be saved all outcry about the heat. I often used to think that there was a little of the fabulous in this horror of the heat in our forcing and plant-houses; because, when I have found ladies and gentlemen starting back at the door, and refusing to enter a plant-house in winter, with a temperature little above 60°, I have seen them enjoying themselves in their own rooms, the fires in which had raised the temperature from 65° to 70°. I have no doubt, however, now, that the extra humidity in the plant-houses at a high-temperature was what rendered them distressing to lungs that had been accustomed to air too thoroughly dried. Such a house, with an average night temperature a little below 60°, will suit a great many tender plants in bloom; while the house itself would constitute a happy and healthy medium between the saturated atmosphere of the forcing-house, and the baked, oven-dried air of the sitting-room.

Begonia obliqua.—Were I confined to two species of this genus for greenhouse use, I would select my favourite, though rough-looking, *Evansiana*, for summer, and *obliqua* for winter. In a house, with an average night temperature from 45° to 48°, I generally have abundance of its pretty pink flowers for three or four months in winter and spring. It is the hardest winter-flowering kind that I know. Loam and peat will grow it admirably. Cuttings may be placed in a slight hot-bed in April, and if encouraged will make nice little blooming plants for the winter following. Old plants may be pruned a little, and tied out in May, receive a shift if necessary, and be kept rather close in a cold pit to encourage growth, or placed in a peach-house or vinery; they will want more air and light in summer; near the glass in a pit, with the sash tilted back and front, until the middle of September, will suit it. From thence to the end of October, the pit should be kept closer and warmer; and by the beginning of November it should be taken to the warmest part of the greenhouse.

Begonia manicata.—This delightful, graceful plant is more tender. The whole of the summer treatment may be the same as for *obliqua*; but as it does not show bloom so soon, it will require an average night temperature of 55° from November to Christmas, to bring up the flower-stems freely and luxuriantly. When the flowers begin to open it will be quite at-home in the warm greenhouse, and will bloom much longer than in a stove, while the individual flowers will open better. No one who has once seen this in its beauty would like to be without it.

Begonia fragrans (M'Intosh's).—I have not yet tried this new kind in this manner, but it seems as if it would be hardy enough for this purpose. I introduce it here, because I am not aware that it has been previously noticed. I know little more of its antecedents than that it was raised at Dalkeith Gardens. Mr. M'Intosh, in addition to great and many kind courtesies, gave some cuttings to a friend, who transmitted them to me in a tin case last spring. Every cutting grew. The plants were kept in a hotbed during the first part of the summer, and then were exposed to more air afterwards, until they were housed in November. They are nice stubby plants, have been in bloom nearly two months, and look as if they would continue ever so long. The habit seems good; the foliage is somewhat fleshy, like *nitida*, but not nearly so large. The flowers are white, somewhat resembling the old *alba sanguinea*, but much larger in the individual blooms, as well as in the bunch; but the best remains to be told. In such dull weather as we have had it is slightly fragrant; but when the sky is very clear, or the sun is shining bright, its scent is delicious. A plant throws its aroma over the whole of a small house. I do not recollect any other *Begonia* that is thus scented. For this property alone it is a desirable acquisition. It would answer well as a warm-

room plant for several weeks. If not in the trade, it is to be hoped that the worthy raiser will take means for its more general diffusion.

Justicia speciosa.—This is almost the only one of the family that will thrive in such a situation in winter. The purple flowers are small and ragged, but a nice bush of it has a pleasing effect. Plants should seldom be kept above two years. Loam and peat will grow it well. Cuttings inserted in sandy soil, under a bell-glass in April, and placed in a hotbed, and potted as soon as struck, kept first in a hotbed, then in a cold pit during summer, or plunged out-of-doors in a sheltered place, will yield nice stubby plants by October, when they should receive a drier and warmer atmosphere to bring them into bloom. They will be gay in such a house from November to the middle of January. Plants that have bloomed one year, may be cut freely back at the end of March, have a little heat to break them, then fresh pot, and after keeping close for a few weeks, an airy cold pit will suit them in summer, keeping them closer and drier again at the end of autumn to cause them to bloom freely.

Gesnera elongata.—This, in such a house, makes no bad successor to the most striking *Gesnera zebrina*. The leaves are long and narrow, and though the scarlet flowers are short, they are produced in great abundance. This should have more peat than loam. Nice little blooming plants may be obtained from cuttings struck in a hotbed in spring, in sandy soil, but without a close bell-glass, potted and kept in heat, and inured to more air, and free exposure in autumn. But two or three year old plants, make the most interesting specimens; though they make a fleshy axis of growth at times, this is not to be depended on, like a corm or tuber. When flowering is finished, or early in spring, say in March or April, cut the plant down to within six or eight inches of the surface of the soil; let it stand rather dry, in a warmish place, until the young shoots are coming freely away, (often the young shoots will be found ready to your hand before you cut down the old flowering shoots) shake away a good portion of the old soil, prune the roots a little, replace in a similar sized pot, give a temperature of from 60° to 65°, if a little bottom-heat, all the better; give another shift when necessary, and keep closish afterwards; by the middle of June transfer them to a pit or house, free from fermenting matter, where you can keep in the sun heat, and syringe over head; give air freely in August, and expose rather freely in September, and a drier air in the end of October will cause the flowers to come freely. With less trouble than is required for a good *Cockscomb*, you will thus obtain flowering plants for three or four months of the gloomiest season of the year.

Torenia Asiatica.—Some enquiries have been made about this lovely plant. The best specimen I have ever seen of this bloomed in spring and summer, after being saved in such a greenhouse during winter, when previously grown to a good size. Such a house will not be sufficient to keep it in a healthy, blooming condition during winter. Few things are more beautiful in clear weather in winter, but it will require a night temperature of from 55° to 60°, and even a little more in mild weather. I tried a beautiful plant the beginning of this winter, but the temperature having got several times below 55°, I was obliged to remove it in a fortnight. Under the most favourable circumstances, it would require to be transferred back again to the stove in a fortnight. In such a heated house few things are more splendid in winter. Plants for this purpose should be grown from cuttings struck in spring. Plants to bloom in greenhouses and glass-cases in summer should be struck the previous season. Old plants kept rather dry, and in small pots, will pass the winter, if the temperature is not below 45°, and will break and make fine

plants next season; but at that temperature they look as woe-begone, to the lovers of luxuriance, as Harry Moore's scarlet geraniums would do.

Eranthemum pulchellum.—This is admired for its beautiful blue flowers. I have used it for many years for such a house. It requires just a little more heat in summer than the *Justicia speciosa*. The habit is naturally so good, it is almost impossible to make a leggy plant of it. Plants in such a house, and in a small plant-stove, have done equally well, and are now nearly done for the season.

Eranthemum nervosum.—This seems merely a variety of the last; but it is much dwarfer, and the leaves are smaller. The backs of the leaves are generally warted, which the uninitiated world mistake for disease.

Euphorbia Jacquiniaeflora.—This will answer for a couple of months after the plants come into bloom. Plants from cuttings do little good the first year, even though you give them hotbed treatment the most of the summer. Old plants that produce stiff, long shoots after being pruned in spring, give the best results, and bear rougher treatment in summer. Cuttings must be allowed to dry before being inserted. Peat, a little loam, and a portion of broken bricks and lime-rubbish will grow these plants well. Old plants may stand under shade when growing in the early part of summer; but they must have full exposure to light, and a fair portion of air in autumn. I have just noticed that this splendid gem is not in our Dictionary by the above name, but I presume it is identical with *fulgens*.

Poinsettia pulcherrima.—This, with its large crimson bracts, will make such a house a blaze from the middle of November to the middle of January. Cuttings of the old flowering-stems, six or eight inches long, dried on a shady dry shelf for eight days after being cut, and then inserted in sandy, open soil in a hotbed, will make nice little plants, with several shoots, each of which will be terminated with its blazer in winter; but two or three-year-old plants yield the finest heads. Prune back within two or three inches of the older wood in March or April, so as to leave as many buds as you wish shoots—from three to eight may be considered a fair number. If one or two start with too much of a lead, stop them, so as to equalise the strength; but never stop after the first of June, or for your pains you will get shoots without flowers, or very small ones indeed. When fairly started, shift or top-dress. A cold pit, when you can give air, and keep close at will, will do for them after June. Manure waterings, in the warmest season, may be given freely. Everything that encourages strong, vigorous shoots, will also encourage large heads of dazzling crimson. To cause these to form, water should be minimised in October. I stated the other week that I had no experience with the white variety. Soil: Loam and peat, with lime rubbish, and top-dressings in summer of cow-dung.

But now a friend says, "All very well, but with my one house for display, even though I have all the conveniences of which you speak, how am I to grow in that house such hardy things as you have lately been alluding to—some pet Cinerarias and Geraniums, &c.—and then flare up with such blazers as these?" All easy enough. Suppose you can command most heat in the centre of your house, place your hardy hard-wooded plants, such as Heaths, Epacris, &c., at the ends; next, the Cinerarias and Geraniums, &c.; and in the middle, such temporary plants as I have indicated to-day; and then give air at the ends, but give none in the middle. Supposing you can command the greatest heat at one end, just act accordingly. One part of the house will thus not only be warmer than the other, but there will be less movement in the atmosphere. R. Fish.

CONSERVATIVE WALLS.

(Continued from page 284.)

I AM very much pleased with the remarks of my courteous friend, Mr. Fish, at page 283, on these walls, and think he is quite correct in observing, that we need a well-defined name for every object in gardening. He, and our readers, will remember, that I was not satisfied with the present term *Conservative Wall*, but would rather invent a new name, and call them *Preservative Walls*. This name, with due deference, I submit to Mr. Fish, would be, in many respects, better than *Conservatory Walls*, because that term would give an idea of what is called, *par excellence*, the *Conservatory*, a kind of aristocratic greenhouse, in which the plants, instead of being grown in pots, are either planted out in beds, or if in pots, these are plunged off of sight, upon which point I may just remark, in passing, that where the plants are of a rampant habit of growth, the plunging them in pots has a tendency to prevent over luxuriance, and induce a more flowering habit. Whether the gardening world will adopt either Mr. Fish's name or mine, is rather doubtful; for when once a name has got firmly established in the many-headed thing, called the public, it is almost an Herculean task to bring another, though a far better-defined name into general use. To conclude this trade about a name, I would just define the words *Preservative Wall* to mean a wall to grow plants against, with or without glass, heated or not heated. This will distinguish it clearly enough from a *Conservatory*, a *Greenhouse*, or any other kind of garden erection. I now return to my original subject; and the next of my series of queries is—What kind of plants should be planted against a *Preservative Wall*? Perhaps the best way to answer this will be by a negative description of what should not be planted. As it is an erection to cultivate either plants with beautiful foliage, though of small merit in bloom, and others of fine foliage and beautiful flowers, no plants of a fugacious habit should be used, such, for instance, as *Cobea scandens*, *Tropæolum Jarrattii*, and *T. azurea*, *Pelargoniums*, the varieties of decided stove-plants, and all annuals. Neither should any be planted that are decidedly hardy enough to grow and bloom in the open air in every part of Great Britain. Some plants are sufficiently hardy to bear the climate of Devon and Cornwall, and such may be fairly admitted as candidates for the honour of being sheltered by a *Preservative Wall* in the more northern parts of the country; whilst, again, in the mild climate of the counties referred to, some of the most hardy stove-plants might be admitted under their protecting and preserving influence, should one, or more than one, be put up in those parts of the country.

Since I began these papers on these walls, I have had several letters on the subject; and one correspondent suggests, "instead of being at the expense of a heating apparatus, fuel, and attendance, would it not be desirable to have a moveable canvass covering to roll down in frosty weather; and would not that be a sufficient preservative for the kind of plants proper for a wall of this kind?" To this I can only reply, that I do not now, nor ever have stated, that a heated wall, or a glass-covered wall, was absolutely indispensable; but with these additions of heat and glass, the building would be more ornamental and more enjoyable; and thus it follows, as a matter of course, that to have a *Preservative Wall* in perfection, the addition of heat and glass are desirable. If the wall is glass-cased only, and not heated, such a covering as my correspondent mentions would be very useful, and would be certain to ward off a great amount of cold in frosty, severe weather, as well as preventing the radiation of heat from the interior through the glass. Plants, as Mr. Fish very justly observes, do not suffer so much when they are still, or,

in other words, when they are not exposed to cold, cutting, frosty winds. To prove this, if proof were necessary, I have seen *Cinerarias* with their leaves stiff with frost in a cold pit, where, of course, they were perfectly still, recover from it by, as it were, naturally thawing in the dark, but had they been exposed to a wind while frozen, they would have been destroyed to a certainty; and if such a tender soft foliaged plant as the *Cineraria* will bear a certain degree of frost if in a still atmosphere, there is no wonder that such plants as I shall in my next paper on this subject name, enduring a greater amount of cold in a glass-covered non-heated wall, because they are still, than they would if exposed to the cold frosty winds of the driving blasts of winter; and this quiet fact is important in cultivation, to a considerable extent, in the kitchen garden; such plants as *Cauliflowers* under a hand-light, as is well known, do not suffer from frost, however severe, because they are still; and in the flower garden, we might preserve many plants if protected by similar means from cutting winds.

T. APPELEY.

(To be continued.)

THE AURICULA.

Autumn and Winter Treatment.—The autumn treatment may be considered to commence as soon as the bloom is over. The plants should then be placed upon a thick bed of coal-ashes, or on boards, behind a hedge, or low north-wall. In this situation they will be protected from the hot sun, and will quietly grow. The attentions they require are regular supplies of water, not saturating showers from a rosed-pot, but just enough to keep them growing. In very wet weather, it will be desirable, where expense is no object, to protect them from heavy showers. I remember, when I was a boy, going to visit an ardent cultivator of the Auricula. Mr. John Wright was his name, and he lived at a place called Marsh, about two miles from Huddersfield, in Yorkshire. He had a large and valuable collection, of which he was justly proud. To protect them from the heavy autumnal rains, he had the space they occupied covered with a sloping roof of oiled canvass, so contrived as to roll up in fine weather, and so high from the ground that he could stand upright within it, and thus was able to attend to their comfort and well-being in all weathers. I was so struck with the complete shelter, neat arrangement, and extreme health of the plants, that I have, even at this distance of time (more than forty years), a lively recollection of the excellence of the plan, and the beautiful healthy appearance of the plants; though now, alas! both the owner and his plants have been passed away for many, many years; so long, that I question whether any inhabitant of that neighbourhood has any recollection of either that indefatigable cultivator, or his fine collection of Auriculas and Polyanthusas.

Such a shelter is by no means expensive. It might be formed against a wall, about twelve feet high, with upright posts in front, and rafters of larch poles fixed to the wall, and a covering of oiled canvass stretched over them, and allowed to hang down a foot or two in front. It should be at least nine feet wide, and as long as the number of plants may require. In the instance above, the plants were arranged on a sloping stage, such as we often see in old-fashioned lean-to greenhouses. This plan is commendable, because each plant receives its due share of light and attention; and the erection might be used, when the Auriculas do not require it, for various other plants requiring such a shelter.

In this autumnal habitation the Auriculas should remain till the end of September. About the beginning of that month, is, in my opinion (borne out by practice),

the best season for repotting the plants. If they are potted earlier, they make their growth, and often send up flower-stems in the early part of winter. This exhausts the energies of the plant, and the second flower-stems produced in spring are much weakened thereby. Some week or ten days previous to the potting-day bring the compost under shelter to become moderately dry, but do not attempt to mix the different ingredients of the compost till they are all in that state.

As soon as the compost is in a fit state for use, bring a portion of the plants into the potting-shed, or if the weather is fine they may be potted on a bench in the open air. If the pots are fresh from the pottery it will be advisable to dip them in water, allowing them to become dry again before using, but if they are old, they should be clean washed. Then have ready a sufficient quantity of clean, broken potsherds for drainage; also a sufficient number of fresh tallies, if the old ones are made of wood. All these being in order, commence potting by turning out of the pot the first plant. Examine the roots, and cut away all that are dead or decaying; shake off the greater part of the old soil, and remove all rooted offsets, laying them on one side till the parent plant is potted. If the root-stock or stem below the soil is too long, so as to elevate the plant too much above the soil (some varieties are apt to elongate more than others), cut the bottom part off with a sharp knife, and apply a little powdered chalk to heal up the wound. This will allow the heart of the plant to be brought down nearer to the soil, and the part of the stem thus brought within the soil will throw out fresh roots and greatly encourage growth. Place over the drainage some of the turfy fibres of the loam, place a thin layer of soil upon it, and then hold the plant in the left hand, place it in the pot, and work in the compost amongst the roots, gradually filling the pot to within half-an-inch of the top, then give the pot a smart stroke upon the bench to shake down the soil firm, and add a little more to fill up the pot to within a quarter-of-an-inch of the top. Press it gently down and closely to the stem all round, and the operation is complete. Before putting the plant out of the way, see to the label or tally, and if a new one is required, place one to it, and then set the plant aside; pot the offsets first, before touching the next; place a tally to them, and then take another plant in hand, and so proceed till the whole are finished. The season of the year has now arrived when the Auricula should have a more southern situation. The sun's beams will now be so moderated, that the plants are able to bear a fuller exposure to them. I now recommend the frame or stage to be placed in front of a west wall facing the east. In that aspect they may, if the weather is clear and warm, require a slight shading from the sun's beams till they have made fresh shoots. The shading may then be discontinued. Here they may remain till the end of October, when they must be placed in their winter quarters; the treatment while there will be our next consideration.

T. APPELEY.

(To be continued.)

DESTRUCTION OF WEEDS.

In the eyes of a botanist, no class of plants are recognized as "weeds" and, with some show of reason, he complains of the tyranny of cultivators who can see no beauty and no interest in anything but that limited number of species they are pleased to call the legitimate occupants of their soil; now, though we have no wish to fan the flame of discord between the botanical and horticultural world, we would rather see the two united, which may easily be done without any great sacrifice on either side, especially in the case we

now have before us, because, though many of our most common British plants present features of great interest to the inquiring botanist, those which infest our walks, squares, and borders, are so abundant as to require no particular notice at our hands in the shape of "protective enactments;" for the dandelion, which blooms by the road-side wastes, is identical to the one, which now and then we see insinuating itself into the less frequented walks of the garden of medium keeping, and though it is seldom allowed to bloom in the latter place, yet its efforts to accomplish that object there, as well as on the close-shorn lawn, shew, in a beautiful way, what struggles nature now and then is capable of undertaking in order to accomplish that important duty of multiplying her species. But, in the present instance, our duty is to prevent that increase rather than encourage it, and, in a mild open winter, the class of plants called weeds (which, according to the late Mr. Loudon's definition of the term, includes every plant not cultivated) are generally allowed to grow away with a sort of impunity which it is difficult to check, the mass of other work, and the adverse elements concurring to their well-being rather than their extirpation. This state of things must not, however, be allowed to go on too long, otherwise something worse than mere present appearance will follow. Squares of vacant ground that the continued wet has prevented a spade being put in may be dug, and all the annual weeds buried; perennial ones, being deeper rooted, ought to be carefully dug out and carried right away at once. Amongst close-growing crops the system of hand-weeding must be put in requisition; while many that will allow the spade in between them will be benefited by slight digging, when the ground will allow it, and thereby bury all small annual weeds, which, instead of being impoverishers of the ground, will become renovators of it, and that freshness which newly-turned-up soil always imparts to growing crops will be gratefully acknowledged by them in the shape of increased growth. This "digging in" is, therefore, attended with the best possible results, so that, whenever crops of cabbages, or similar things, present a quantity of small seedling weeds, which it is advisable to eradicate, this digging in will accomplish the job with the additional advantage of conferring a benefit on the existing crop. How far this may be carried on in other ways will depend on certain local circumstances. On some soils weeds will struggle successfully in again getting their heads above ground, while in others the attempt seems abortive. However, in a general way, we are no advocates for carrying any quantity of annual weeds or other vegetable refuse off the ground, unless it be of a kind of extremely slow decomposition, as the stalks of the cabbage tribe, and haulm of asparagus; the latter, forming a tolerable good covering for things requiring protection, is often used that way. And when the stalks of the Cabbage-worts are stripped of their leaves, the remaining portion is too small to run the risk of contaminating the ground, if it is dug in with wire-worm, and other pests. That time would be the case is evident from the numbers that congregate around a half-decayed stem of this plant where it is left in the ground; while the succulent herbage of ordinary weeds present nothing but a quiet-decaying substance to the action of the soil, to which it is speedily assimilated when vitality is gone.

From the above, it will be seen that digging in weeds and other herbage is strongly advised, as returning to the earth these elementary parts it is so much in need of; but then another question arises—what is to become of the weeds which a wet, mild winter sends forth on our walks, court-yards, carriage-roads, and other places where neatness is (or ought to be) "cultivated" instead of "plants?" Here a system of anti-cultivation must be pursued; but how is this opposing course to be

accomplished has been the theme of much controversy. In a usual way, the remedy is labour, and hand-weeding or hoeing is had recourse to—the latter, of course, the most expeditious when practicable; but this not being so in many cases, and hand-weeding tedious and expensive, various expedients have been adopted to destroy the weeds by other means than removing them. Poisonous ingredients have been applied in the shape of gas water, and infusions of various mineral poisons, with more or less success; but as all these are either dangerous in their use, or expensive appliances, it would appear that much yet has to be done in the way of annihilating weeds from such places. Salt has been strongly recommended, and by some has no doubt been found beneficial, by others less so; and our experience has been somewhat conflicting that way, that we cannot, without some qualification, recommend its use.

If it is employed as all it must be systematically followed up, and then its benefits will doubtless show themselves. A slight sprinkling of salt, followed by wet weather, cannot be expected to effect any permanent good; but repeated and judicious applications may, and no doubt do, so saturate the ground with its saline particles as to be no longer in a condition fit to support vegetable life. That the cases of successful management, when this course is adopted, arise from this cause, is evident enough, while a solitary dose may have given increased fertility to the places where it has not been repeated. Hot water, too, has been strongly recommended, and Mr. Fleming's machine for blending the two together would seem to have supplied the desideratum we have so long been aiming at. Unfortunately, its first expense, coupled with the difficulty there is sometimes of supplying it with water, &c., in sufficient quantities to make its working economical, prevents its general use, so that we hope yet to see some cheaper and readier way of dealing out destruction to the myriads of weeds and mosses which disfigure all walks not much used; the latter class of vegetation has been more conspicuous during the past autumn than any hitherto for some years, the mild, moist weather being so congenial to its growth.

Where, on sound, well-prepared walks it is not advisable to disturb any portion of their surface, some other destroyer must be put in requisition. A very good one may be adopted at times, when the weather admits it, which is not, however, always; but where moss is growing on the surface of a path consisting of gravel or stones that have become smoothed tolerably fine by rolling or use, the moss will be found occupying all the interstices between such stones. Now, to remove it from thence by ordinary hand-labour would be both troublesome and expensive. It is, therefore, better if we can avail ourselves of the elements to effect our purpose thence, which in this case can be done in many instances. Charged as this vegetation is with water, together with the ground that supports it, a sharp frost exercises a destructive power upon it; but, more than that, the expansive powers of frost raises from the ground the whole mass of vegetable life, with its roots, &c., so as to appear in bold relief to the stones not subject to such a change. While in this condition the exercise of a good scrubby broom has a sweeping effect; but it must be borne in mind that it must be done at the precise moment the frost gives way, because a heavy rain sinks it again to its former position. It is only those who have witnessed the phenomenon we speak of that are aware of the singular appearance it has, and only those who avail themselves of the proper time to remove it that can tell of the benefits to be derived from it, as its loosened condition enables it to be removed with more precision than many are aware of, while the stones are not disturbed in the least. Now, though we do not object to the use of salt, or salt and water, either hot or cold, nor to the various

liquids to which poisonous matter has been added, yet, as a simple, safe, and efficacious remedy for the evil complained of above, we advise the use of a little hard labour at the fitting time; and those having walks of the kind mentioned would do well to sweep the snow from them, if needful, and expose them to the full action of frost, which we have no doubt will prove a better friend in the way of destroying moss than the hazardous plan of trusting your edgings, and the roots of trees which may have run underneath the walk, to the tender mercies of repeated applications of deleterious matter. That the latter may, with perfect propriety, be adapted to those cases where there is no danger of such a course, we certainly admit—nay, even advise—but we confess our inability to point out the most suitable ingredient applicable in all cases. Parties residing in the neighbourhood of gas-works might easily obtain that poisonous liquid called gas-water; various chemical factories also present waste matter available to places sufficiently near; but these are isolated cases, and cannot be fairly said to meet the object in view. What we want, is a cheap, safe, and effectual remedy for the destruction, or rather prevention, of weeds growing on walks and other places where their presence cannot be tolerated. That the exertion of some one who may devote his attention to a successful issue in this matter will be gratefully received by the gardening world, we have no hesitation in affirming; while, at the same time, we can hardly expect the first efforts of skill to be entirely all we want; but, from the importance of the case, we should like to have the opinion of some one well versed in chemistry pointing out the way; while, of the manufacturing patrons of horticulture, we again ask, what has been several times repeated in *THE COTTAGE GARDENER*, What can they do in providing us with a cheap and better covering for our frames than the things we now employ? This, like the "weed annihilator," is assuredly more in the province of others than that of the gardener; and we invite such to our aid, assuring them that no class are more grateful for favour shown, and in none is the selfish, restrictive policy of keeping knowledge at home so seldom found, as in the horticulturist.

J. ROBSON.

PANSIES GROWN IN SCOTLAND.

As I only receive *THE COTTAGE GARDENER* once a month, I have just noticed an article in that of the 9th of December, 1852, containing a list of Pansies, furnished "by a gentleman so far north as Berwick-upon-Tweed," and although, in the main, generally good, still I do not think that it shows the southern growers what amateurs residing "a little farther north," near Auld Reekie, can do; and I annex you a list of what I consider a better, and not more expensive, selection, suitable for a small garden. I have myself upwards of 120 varieties; and as I have flowered every one that I have mentioned in the annexed list, with the exception of *Boadicea* (Fellows), I can confidently recommend them. You will observe I have retained what I consider good in our Berwick friend's list.

WHITE GROUNDS, WITH MARGINS OF BLUE, PURPLE, LILAC, AND THEIR INTERMEDIATE SHADES.

Boadicea (Fellows); white and purple (not known to writer).

Duchess of Rutland (Thomson); white and lilac; good, but uncertain.

France Cybele (Grévy); white and maroon; old, but good.

Helen (Hunt); white and light purple; good when caught.

Lord Jeffrey (Lightbody); white and dark blue; good.

Miriam (Dickson and Co.); white and dark purple; eye sometimes run; when caught, fine.

Mirror (Dickson and Co.); white, and broad blue belt; fine.

Miss Talbot (Dickson and Co.); white and purple; very fine.

Miss Maxwell (Downie and Laird); white and dark blue; fine and constant.

Mrs. Blackwood (Downie and Laird); white and pale bluish-purple; good; new.

Mrs. Beck (Turner); white and purple; very fine.

Queen of England (Fellows); white and bright blue; good.

Royal Standard (Dickson and Co.); white and dark purple; best of its class.

Royal Visit (Dickson and Co.); white and deep maroon; very fine.

YELLOW GROUNDS, WITH MARGINS OF MAROON, BLUE, PURPLE, AND THEIR SHADES.

Constance (Thomson); yellow and purple; small, but good.

Diadem (Fellows); gold and maroon; very fine.

Duke of Norfolk (Bells); yellow and deep maroon; runs in heat of summer, but good when caught.

Elegant (Thomson); gold and bronze-red; fine.

Gliff (Dickson and Co.); yellow and maroon; very large.

Jubilee (Dickson and Co.); pale yellow and reddish-purple; neat; medium size.

Juventa (Hooper); yellow and maroon; fine.

Lady Emilio (Downie and Laird); yellow and claret; constant.

Mr. Beck (Turner); yellow and maroon; good, but very like *Orestes* (Gossett's).

Post Captain (Maishment); yellow and bronzy purple; constant.

Robert Burns (Campbell); yellow and fine purple; very large; fine.

Supreme (Yocell's); yellow and maroon; one of the finest old varieties, not beat yet.

SELFS.

Adela (Turner); yellow; fine.

Ajax (Downie and Laird); dark blue; very fine form, and constant.

Blanche (Turner); finest white out; splendid blotch.

D'Ireneli (Hunt); glossy purple; fine when caught.

Flower-of-the-Day (Downie and Laird); fine plum; golden eye.

King (Jennings); dark purple; fine.

Magnificent (Neilson); shaded puce, laced with white; fine.

Nox (Hooper); dark blue; very fine.

Sambo (Hale); dark plum; good.

St. Andrew (Downie and Laird); nearly black; very fine.

Sovereign (Dickson and Co.); golden-yellow; one of the finest in cultivation.

Uranus (Dickson and Co.); good yellow, but uncertain.

PANSEIANA, Edinburgh.

GREAT METROPOLITAN POULTRY SHOW.

It would be a difficult task to decide to whom, or to what county, is fairly due the credit of having originated the exhibitions now so common, which are encouraging the cultivation and improvement of the various breeds of poultry, and opening, to an extent likely still to be much enlarged, a source of profit to the farmer and the cottager, and of interest and amusement to Peer and peasant alike.

The pages of *THE COTTAGE GARDENER* have contained accounts of shows of poultry in various parts of England. Halifax, Hull, Preston, Liverpool, and other towns, have spoken to the interest excited of this subject in the north; Winchester, Salisbury, &c., have borne witness to a corresponding spirit in the south; Cheltenham and Birmingham have represented the midland counties; and while York, Norwich, and Hitchin, have done their part in the east; Bristol, Torquay, Truro, and Penzance, have shown that the west, to the very Land's End, are not behind in the competition. But to the surprise of many, and the regret of more, no show in London worthy of the Metropolis had yet taken place. This was the more to be lamented, because in spite of confined yards, smoky atmosphere, and want of grass, the taste for poultry in London has been long and successfully cultivated, and more especially by many tradesmen and mechanics who, though barred by circumstances from attending and exhibiting at some of the country shows, have possessed their favourite White-faced Spanish, or

Shanghai pets, on whom they have bestowed as much care as the feathered favourites in more spacious "walks," have ever received from their owners.

The difficulty of establishing a Metropolitan Show arose partly from the fact, that London (unlike Birmingham) possessed no Bingley Hall suitable for the reception of a large number of poultry. Few persons, moreover, were eager to embark in so large an undertaking, with the certainty of great trouble and responsibility, and the risk of heavy pecuniary loss.

Things would probably have thus remained, but for the zeal and energy of one very eager and experienced, as well as successful, poultry amateur, Mr. Henry Gilbert. Encouraged by the promise of assistance from his friends in the country, that gentlemen undertook the task, and, aided by a clear-headed and hard-working committee, he has most ably surmounted all difficulties, and has fully attained the success he so well deserved. He has succeeded in collecting a show of poultry, second only to that which a month before took place at Birmingham; and he has given great pleasure to the many, who, during the four days of the exhibition, crowded the Bazaar, and showed the lively interest they took in the various breeds which were there displayed.

To the many readers of THE COTTAGE GARDENER who were unable themselves to be present, we propose to give a short, and, we hope, an impartial account of what we saw, there, and to offer the opinions, which, to the best of our judgment, we formed.

The original place fixed upon for the show was the Oval at Kennington. At the eleventh hour, however, the committee found this would not be permitted. No alternative, therefore, presented itself but that of deferring the day from the 1st to the 11th of January, while arrangements were being made to receive the poultry at the Baker street Bazaar, a "locale," which, indeed, in most respects, we consider a preferable one to the Oval. In the galleries of this building very commodious and roomy pens were erected; and the space left for the visitors, and the arrangements regarding lighting and ventilation, were nearly all that could be desired.

For the information of our readers we annex a comparison of the entries of each variety, made respectively at Birmingham and the Metropolitan. It will be seen that (especially as a first attempt) the latter has no cause for shame in the comparison.

PENS ENTERED.

Classes	Birm.	Metr.
Spanish	64	36
Dorking	142	70
Shanghai	275	249
Malays	70	10
Game	161	48
Golden-pencilled Hamburgs ..	13	11
Golden-spangled Hamburgs ..	28	11
Silver-pencilled Hamburgs ..	58	21
Silver-spangled Hamburgs ..	66	14
Poland	68	37
Cuckoo	6	..
Runpless	1	..
Andalusian	2	..
Ancona	1	..
Frizzled	4	..
Norfolk or Surrey	2	..
Bantams, Gold-faced	35	24
" Silver-faced	6	11
" White	12	13
" Black	13	16
" other varieties	5	45
Pigeons	85	about 250
Geese	14	11
Ducks	73	38
Turkeys	23	10
Guinea fowl	6	..
Extra Class .. .. .	..	27

In these classes, therefore (besides rabbits), nearly 700 pens of poultry were arranged, and taken as a whole, they may be considered a very good collection, amongst which were many superior specimens.

The list of prizes was framed on the scale adopted at Birmingham, and was a liberal one. The general rules

were also the same, with the exception of two, which were (as we think) with advantage omitted.

We know that the Birmingham clause, requiring a "two months ownership," was evaded there, and as we see no real use in it, we rejoice in its exclusion from the Metropolitan rules.

We also approve of the regulation which allows any subscriber to send to the show any number of pens, on a certain payment for each pen, instead of (as at Birmingham) limiting the number to six pens, which, as we know, was also evaded there, and is, therefore, an unwise rule, if only because it is inoperative.

We must, however, express our opinion, that the corrections might still have been judiciously extended, and that there are two rules especially, which, before any future meeting, we would gladly see altered.

1st. Is, as at present, chickens are allowed to compete with old birds, we assert that the comparison must be very unfair to the latter. The plumage of the chickens (especially in the Dorking and some other classes) will be brighter, and show better than that of the adult birds. We think that chickens ought to show against chickens, and old birds against their fellows.

2nd. To any real amateur, the length of time during which the poultry are retained in the show, and the suffering (and risk of life even) which in consequence they undergo, must be a subject of regret; and we will venture to express a hope, that at the next Metropolitan Show the committee will take another step in the right direction. To say that the time is the same as it was at Birmingham, does not prove that it is well to retain the poultry so long. If the poultry were received on the Monday, and judged on Tuesday, and if, instead of four days, the show were limited to three days, which would be enough to gratify public curiosity, the fowls might then be released on Friday night, to the mutual convenience and satisfaction (we are sure we may say) of themselves and their owners. We will now nothing extenuate, nor set down aught in malice, but proceed with our critique on the different classes, which we will take in the order in which they stand in the prize list.

The Spanish class, which contained altogether 36 entries, was well represented. The first prize, for a cock and three hens, falling to a very perfect pen (9) belonging to Captain Hornby, Mr. Fox taking the second. The prizes in the second class, for Spanish chicken, going to Mr. Fox, Mr. Whittington, and Captain Hornby, who also won the 1st prize in class 3.

Of Dorkings of various sorts, there were altogether 70 entries, and this was considered a very good class. For the various winners we must refer our readers to the prize list, only remarking that we are very glad that the Committee liberally awarded to Captain Hornby an extra first prize, as the mistake which had deprived him of it arose from the Society's own men when taking the birds from their baskets.

The Cochins classes, as usual, attracted great attention, and well repaid the careful inspection they received, for (with the exception of classes 13 and 14, which we thought very moderate) the pens presented, generally, a very good collection of birds.

Amongst the White Cochins was a beautiful pen belonging to Mr. Fairlie, which received the first prize, as did also a very good lot, the property of Dr. Allen, in the chicken class.

Of Malays, there was but a small show, and we cannot say we much admire this class.

The Game fowls mustered in force, consisting altogether of 48 pens, which attracted much attention, and as a class deserved great commendation, which may also be said of the various breeds of Hamburgs, both Spangled and Pencilled. Amongst the Silver-pencilled, especially, were some good pens, particularly one belonging to Mr. McCann.

A good show of Polands, which did not, however, attract very much attention. We think this class (like the Malays) are becoming much less popular than formerly.

The Bantams were a numerous class, and on the whole well represented. As usual, they had a constant succession of admirers, especially among the ladies.

Class 47, for any other distinct breed, had 40 entries of all sorts, amongst which we observed some black Cochins, belonging to Mr. Fairlie, which were much admired; and

some *Bramah Pouter*s, which we think no acquisition to the poultry-yard.

Besides this, there were 27 entries of extra stock, only entered for sale, containing (with other things) some good *Cochin-Chinas*.

The Class for *Géset*, though only consisting of 11 entries, showed some very good pens; as did also the division for the *Turkies*, especially those belonging to Mr. Fairlie, who took the first and second prizes, which he well merited. The weight of one of the Turkey cocks we heard exceeded 32 lbs.

It has often been a subject of surprise to us, that to these two classes better prizes are not awarded, as there is great room for improvement in the former by judicious crosses, and the excellence of the latter class attained here can only be done by care and trouble.

The *Ducks* were a good class. A fine pen of *Stylenburgs*, belonging to Mr. Jennens, taking the first prize whilst that for *Houens* fell to an equally deserving one, the property of Mr. Worrall.

The *Pigeons* (of which there were about 250 pens), as a class, rather disappointed expectation. There were, however, some favourable exceptions, amongst which may be named some *Carriers* belonging to Mr. Hayne.

The *Rabbits* (of which about 50 were shown) were an excellent collection, but did not seem to attract attention, probably from a want of the knowledge of what constitutes their points of excellence.

The arrangements generally were good, though still capable of the improvement which, next year, we doubt not will take place; but disappointment was expressed at the delay in issuing prize lists, which we did not succeed in getting until the third day. Great care seemed to be bestowed in feeding and cleaning the birds, so as to soften, as much as possible, their long confinement; and to destroy every egg laid in the pens. We cannot approve of the resolution to offer all the poultry to competition by auction on the third day—a system (we think) which cannot prove profitable to sellers, and was (we know) not approved of by many would-be-buyers.

The judges were E. Hewitt Esq., of Birmingham; W. Symonds, Esq., of Weymouth; and Mr. J. Bailey, of London; and we believe the care and attention which they bestowed in the discharge of their arduous duties secured general approbation; and though, with so many entries, there must be some few disappointed exhibitors, we understand the verdicts were generally concurred in.

We hope, however, that 1853 will see introduced a change in the system of judgment. We should like more judges appointed, say four judges for the adult birds, and the same number for the chickens, with a referee for each; for we contend that the examination, as at Birmingham, of 1300 pens, working for thirteen hours is too much for the physical powers of one set of men. We were glad to hear that many of the principal exhibitors had come to the resolution of never sending their birds to any show where they would be kept more than three days. We hope this will be adhered to.

In conclusion, our congratulations are justly due to the Committee and Secretary, who have gallantly started and successfully carried out, a Poultry Show, bidding fair to be a dangerous rival to the Birmingham Society, which, though now holding the rank of the first Exhibition of Poultry in England, will require all the energy of its committee, and many alterations made in the management, or its fame may be eclipsed, and its position usurped by the Great Metropolitan Exhibition.

The following is a list of prizes awarded by the judges:—

SPANISH.

Class 1.—Pen of, first prize, Captain Hornby, Knowsley Cottage, near Prescott, Lancashire; second prize, 1, Mr. Fox, Skinner-street, Snow-hill; third prize, 3, Mr. Thomas Jones, Vale-place, Hammar-smith.

Class 2.—First prize, 1, Mr. Thomas Fox, Skinner-street, Snow-hill; second prize, 3, Mr. T. Jones, Vale-place, Hammar-smith; third prize, 11, Captain Hornby.

Class 3.—First prize, Captain Hornby; second prize, 7, John Taylor, Esq., Shepherd's Bush.

DORKING (Single-combed).

Class 4.—First prize, 2, Mr. J. Sewry, Handcross, Crawley; second prize, 4, Mr. J. Lloyd, Biddenham; third prize, 11 and 12, Captain Hornby.

Class 5.—First prize, 2, Mr. J. Lewry, extra first prize, 11, Captain Hornby; second prize, 16, Mr. John Fairlie, Chevelay-gate, Newmarket; third prize, 8, Mrs. F. Noyes, Salisbury.

DORKING (Double or Rose-combed).

Class 6.—First prize, 3, Mr. J. Onthart, Cooper's-hill, Chertsey; second prize, 2, Mr. J. Thorn, Mawley-house, South Lambeth.

Class 7.—First prize, 1, Mr. Thomas Nice, Great Bradley-Hall, Newmarket; second prize, 4, Mr. John Fairlie.

DORKING (Double or Single-combed).

Class 8.—First prize, 13, Captain Hornby; second prize, 6, Rev. John Boys.

DORKING (White).

Class 9.—First prize, 3, Mr. J. Jennens, Moseley; second prize, 5, Mr. James Oldham, Long Exton, Derby; third prize, 7, Mr. Nathaniel Antill, Portsea.

Class 10.—First prize, 2, Mr. Joseph Jennens, Moseley; second prize, 1, Mr. H. Forster, Markgate-street, Dunstable.

COCHIN-CHINA (Cinnamon and Buff).

Class 11.—First prize, 9, Mr. John Fairlie, Newmarket; second prize, Mr. T. Potts, Kingwood-lodge, Croydon; third prize, ditto.

Class 12.—First prize, 50, Mr. T. Potts, Kingwood-lodge, Croydon; second prize, 49, Mr. T. Potts, Kingwood-lodge, Croydon; third prize, 1, Captain Squire, Barton-place, Mildenhall.

COCHIN-CHINA (Brown or Partridge Feathered).

Class 13.—First prize, 6, Mr. John Chater, Haverhill; second prize, 7, Mr. Thomas Bridges, Bridge-cottage, Croydon.

Class 14.—First prize, 10, Mr. Thomas, York.

COCHIN-CHINA (Cinnamon and Buff, or Brown).

Class 15.—First prize, 81, Mr. John Bidewell, Guildford; second prize, 7, Mrs. George, Chalden, Couladon, Surrey; third prize, 1, Captain Squires.

COCHIN-CHINA (White).

Class 16.—First prize, 4, Mr. J. Fairlie; second prize, 2, Mr. E. L. Preston, Great Yarmouth.

Class 17.—First prize, 5, Rev. Dr. Allen, Englefield-green; second prize, 1, Mr. G. C. Adkins, Edgbaston.

MALAY.

Class 18.—First prize, 4, Rev. Dr. Allen, Englefield Green; second prize, 3, Mr. W. Wodehouse, 68, Bridgeport-place, Hoxton; third prize, 1, Mr. W. W. Hayne, Sutton, Surrey.

Class 19.—First prize, 3, Mr. S. Soames, Stepney, Middlesex; second prize, 6, Mr. G. Oldham, Nether Whitesacre.

GAME FOWL (White and Piles).

Class 20.—First prize, 6, Mr. H. Thurnall; second prize, 2, Mr. W. G. Vivian, Singleton, Glamorganshire.

Class 21.—First prize, 3, Mr. W. Groom, Holt, Norfolk; second prize, 1, Mr. R. Wilton, Moon-place, Stamford-le-Hope.

GAME FOWL (Black-breasted and other Reds).

Class 22.—First prize, 7, Captain Hornby; second prize, 1, Mr. F. H. Powell, Hillingdon, Middlesex; third prize, 4, Mr. A. Connell, Cringleford, Norfolk.

Class 23.—First prize, 3, Mr. M. Wilson; second prize, 11, Mr. Thurnall, Royston.

GAME FOWL (Blacks and Brassy-winged, except Grays).

Class 25.—First prize, 2, Mr. W. Deater, Seckington, Warwickshire; second prize, 1, Mr. R. W. Wilson.

GAME FOWL (Duckwings and other Grays and Blues.)

Class 26.—First prize, 4, Mr. H. Thurnall, Royston, Cambridgeshire; second prize, 3, Mr. E. A. Lingard, Snow-hill, Birmingham; third prize, 3, Mr. G. C. Adkins, Edgbaston.

Class 27.—First prize, 1, Mr. E. W. Wilson; second prize, 2, Mr. R. W. Wilson; third prize, 3, Mr. C. Stinton, Hamworth.

GOLDEN-PENCILLED HAMBURGH.

Class 28.—First prize, 2, Mr. J. B. Chune, Colebrookdale; second prize, 5, Mr. J. E. Mapplebeck, Highgate, Birmingham; third prize, 1, Mr. T. Church, Acle, Norfolk.

Class 29.—First prize, 2, Mr. H. Worrall, Knotty Ash-house, Liverpool; second prize, 1, Mr. T. Barber, Acle, Norfolk.

GOLDEN-SPANGLED HAMBURGH.

Class 30.—First prize, 3, Mr. G. Adkins; second prize, 1, Mr. Lightfoot, Markgate-street, Dunstable; third prize, 4, Mr. G. Adkins.

Class 31.—First prize, 1, Mr. J. Mould, Makinney-house, Belper; second prize, 5, ditto.

SILVER-PENCILLED HAMBURGH.

Class 32.—First prize, 8, Mr. E. How, Bromley, Middlesex; second prize, 1, Mr. E. Archer; third prize, 4, Mr. F. Wigan, Edgbaston.

Class 33.—First prize, 3, Mr. G. McCann, Malvern; second prize, 10, Mr. J. Mapplebeck.

SILVER-SPANGLED HAMBURGH.

Class 34.—First prize, 2, Mr. J. Whilock, Birmingham; second prize, 4, Mr. W. G. Chambers, Portsmouth; third prize, 1, Mr. J. Whilock.

Class 35.—First prize, 4, Mr. E. Simons, Dale-end, Birmingham; second prize, 2, Mr. J. Whilock.

POLAND FOWL.—(Black, with White Crests.)

Class 36.—First prize, 1, Mr. G. C. Adkins; second prize, 2, ditto; third prize, 4, Mr. T. B. Edwards, Lyndhurst.

Class 37.—First prize, 3, Mr. T. P. Edwards, Lyndhurst; second prize, 2, Mr. W. G. Chambers, Portsmouth.

POLAND FOWL.—(Golden, with Ruffs or Beards).

Class 38.—First prize, 3, Mr. J. E. Mapplebeck; second prize, 1, Mr. W. G. Vivian; third prize, 2, Mr. C. Clarke, Street, near Glastonbury.

Class 39.—First prize, 1, Master G. Hornum, Charlotte-street, Hull.

POLAND FOWL. (Golden, without Ruffs or Beards).

Class 40.—First prize, 1, Mr. J. E. Mapplebeck, Birmingham; second prize, 2, Miss E. S. Perkins, Sutton Coldfield.

Class 41.—First prize, 3, Mr. W. Cutler, Bathampton; second prize, 4, the Hon. Mrs. Finch, Berkhampstead.

POLAND FOWL. (Silver, with Ruffs or Beards).

Class 42.—First prize, 3, Messrs. Baker, Chelsea; second prize, 2, Mrs. C. Clarke; third prize, 1, Mr. W. G. Vivian.

Class 43.—First prize, 1, Mr. W. G. Vivian; second prize, 3, Master G. Horner.

POLAND FOWL. (Silver, without Ruffs or Beards).

Class 44.—Second prize, 2, Mr. C. J. Mould.

BANTAMS. (Gold-laced).

Class 45.—First prize, 4, Mr. G. C. Adkins; second prize, 31, Mr. H. T. Leigh, Turnham-green.

BANTAMS. (Silver-laced).

First prize, 36, Mr. H. J. Jones, Bedford; second prize, 39, Mr. Fairlie.

BANTAMS. (White).

First prize, 40, the Rev. G. F. Hodgson; second prize, 46, Mr. W. Beller.

BANTAMS. (Black).

First prize, 56, Mr. J. Fairlie; second prize, 49, Mr. F. H. Fox.

BANTAMS. (Black-breasted Red).

First prize, 62, Mr. W. S. Forrest, Greenhithe.

BANTAMS. (Ginger or Buff).

Second prize, 63, Mr. Dutton, Bury St. Edmunds.

PIGEONS.

3. Black cock Carrier. Mr. W. W. Hayne, Sutton.
13. Dun cock Carrier. Mr. G. C. Adkins, Edgbaston.
16. Blue cock Carrier. Mr. W. W. Hayne, Sutton.
17. Blue cock Carrier. Mr. W. W. Hayne, Sutton.
59. One pair silver short-faced Baldheads. Mr. F. Thirkell, Sydenham.
60. One pair black Jacobines. Mr. F. Thirkell, Sydenham.
62. One pair red Jacobines. Mr. F. Thirkell, Sydenham.
67. One pair yellow Jacobines. Mr. F. Thirkell, Sydenham.
73. One pair white Jacobines. Mr. F. Thirkell, Sydenham.
76. One pair blue Owls. Mr. F. Thirkell, Sydenham.
78. One pair silver Owls. Mr. G. C. Adkins, Edgbaston.
81. One pair yellow Owls. Mr. C. H. Brown, Fulham.
84. One pair yellow splashed Owls. Mr. F. Wagon, Woodbridge, Suffolk.

88. One pair black-headed Nuns. Mr. G. C. Adkins, Edgbaston.
93. One pair blue Turbits. Mr. A. Grote, the Elms, Upper Tooting.
96. One pair black Fantails. Mr. G. C. Adkins, Edgbaston.
97. One pair blue Fantails. Mr. H. Child, Sherborne-road.
100. One pair white Fantails. Mr. Strange, Astley Burgh Hall.
111. One pair black Magpies. Mr. G. Vivian, Singleton.
115. One pair mottled Trumpeters. Mr. G. B. Chune.
116. One pair Spanish Runts. Mr. G. C. Adkins, Edgbaston.
126. One pair Archangels. Mr. Bailly, jun., 126, Mount-street.
135. One pair Dreadnoughts. Mr. G. Vivian, Singleton.
136. One pair Australian. Mr. G. C. Adkins, Edgbaston.
137. One pair Bronzewings. Mr. G. C. Adkins, Edgbaston.
138. One pair Frill Backs. Messrs. Baker, Chelsea.
139. One pair Hiredells. Messrs. Baker, Chelsea.
140. One pair blue. Mr. G. W. Vivian, Singleton.
150. One pair short-faced red Tumblers. Mr. Evans.
165. One pair red Baldheads. Mr. Evans.
171. One pair Blue Beard, short-faced. Mr. Evans.
172. One pair red mottled Tumblers. Mr. Evans.
177. One pair black Baldheads. Mr. Evans.
187. One pair black mottled Tumblers. Mr. Evans.
195. Rock Mottles. Mr. J. M. Eaton, 7, Islington Green.
212. Large blue Cropper cock. Mr. Evans.
213. Large red pied Cropper cock. Mr. Evans.
215. Pair black pied Pouters. Mr. Evans.
225. Pair white Pouters. Mr. Evans.
228. Pair yellow shoulder Turbits.
230. Pair white Owls.
235. Pair of yellow mottled Dragons.
197. Almonds. Third Class, Mr. Eaton, 7, Islington Green.

RABBITS.

1. First prize, length of ear. Mr. Haile.
44. Second prize, length of ear. Mr. James Handey.
37. First prize, black and white. Mr. J. Douthwaite.
16. Second prize, black and white. Mr. R. Venes.
34. First prize, yellow and white. Mr. W. Crick.
15. Second prize, yellow and white. Mr. W. Lock.
31. First prize, tortoiseshell. Mr. W. Crick.
20. Second prize, tortoiseshell. Mr. J. Macmeikan.
23. First prize, blue and white. Mr. J. Macmeikan.
26. Second prize, blue and white. Mr. J. Douthwaite.
23. First prize, self colour. Mr. W. Crick.
40. Second prize, self colour. Mr. J. Lightfoot.
10. First prize, weight. Mr. R. Stanton.
19. Second prize, weight. Mr. R. James.

ON THE CULTURE OF TROPEOLUM TRI-COLORUM.

In an article on this subject, which lately appeared in one of the gardening periodicals, it was stated that bulbs of *Tropeolum tricolorum*, *T. Jarrettii*, &c., occasionally show an

inaptness to break; and in the same article, the only mode of propagation pointed out (beyond that of raising plants from seed) was the striking of cuttings. Now, as I have grown this flower many years, and never yet had a bulb fail to break, and, moreover, have found the bulbs increased as readily as potatoes, it may be useful in my brother amateurs (and to those only I am bold enough to address myself), if I acquaint them with my method.

To begin, then, with the tail of the pig. After the plants have done blooming, I lay the pot, haulm and all on, on its side, in a place open to the south, but well sheltered from the rain. When the haulm is thoroughly dry I remove it, and then leave the pot, with the bulb and earth in it, uncared for till its time for growth again arrives. When the bulbs have started, I remove the old dry soil, and repot in 48's or 60's in a soil half leaf mould, and half sand, and leave them to continue their growth in the open air till the shoots have grown to the length of a yard or more; then I repot into upright 10's (the largest size I can afford space for), placing the contents of the small at the bottom of the larger pot (having first placed therein a liberal drainage), and as I fill the large pot with earth, I insert round and round within it the yard or so of shoots, so that when the repotting is complete, just the noses only of the growing stems are visible above the surface of the soil, and I then place the pots in their winter quarters.

In this way I find the plants grow stronger, and flower more freely than when the bulb (as I believe is usually the case) is placed in its blooming-pot just below the surface of the soil. When the time for removal comes, I seldom fail to find eight or ten good-sized bulbs not much smaller than the parent bulb, besides a number of smaller ones in the pot.

The soil I use for the blooming-pots is three-parts of well-decayed turves from a light loamy pasture; two-parts half-rotted leaf mould; and one-part thoroughly decomposed cow-muck. I have occasionally added half-a-part of white sand, but have found that the plants do as well without it. I give no water till plenty of leaves are expanded, and then but sparingly, till the blooms begin to open, when the usual summer watering of greenhouse plants is required.—J. S.

ANTWERP CARRIER PIGEON.

Few persons, I am inclined to think, are really aware of the origin of this pigeon, though most pigeon-fanciers know something of it, in one or other of the many crosses between it and other flying-pigeons; all these being known by the name of Antwerp Carriers.

A remark occurs in *THE COTTAGE GARDENER* of August 19th, by "D," to the effect, that the pigeons of the Calaisis and Adresis show some resemblance to the Antwerp, and that the Blue-rock is rarely, if ever, met with. In this I perfectly agree; but I can assure "D," fancy pigeons are also to be met with, and the true Rock pigeon of Belgium is, I have every reason to believe, the real Antwerp Carrier, and their meaty colour is the prevailing one of the Belgian Dove-house pigeons—whence the similarity.

The true Antwerp resembles the wild Blue-rock pigeon of England in everything except colour; they are of a very light strawberry colour; rather darker, and inclining to red round the lower part of the neck, and having two reddish bars across the wings; the colour is what fanciers call meaty.

Some of these wild pigeons breed, I have been informed, in the church spires and towers of Antwerp, but they are, my informant tells me, so exceedingly wild, that they never mix with the tame pigeons; and cannot be caught; young ones are occasionally taken, and these retain much of their natural wildness although brought up by hand.

These pigeons I consider to be the source of our Antwerps; small wild birds, with very full round front to the head; the eyes gravel or orange-coloured, and very prominent; head long, like a Rock pigeon, and colour meaty; some have a few black snatches on their feathers, and this is thought to indicate extra goodness.

They are exceedingly wild, and can rarely be brought to breed, except in their own homes, and if let out return there directly, though they may not have seen it for many months.

I am informed the breeders of them at Antwerp rarely

part with them; but when they do, rely on their returning, though they are brought to England.

It is surprising what distances they will return, and how little training they want, so that they would quite astonish our pigeon-flying gentlemen.

A variety of Antwerp, better known in England, are the short-faced Antwerps, also renowned for the long journeys they will perform.

In the Rhine provinces of Prussia, where I resided some time, the Turbits or Owls (for they do not discriminate between them there) were the only pigeons known as letter-carriers. Throughout Belgium these pigeons were at one time generally used as such (at least so I have frequently been informed), and, therefore, it is not to be wondered at that they should have been crossed with the true Antwerps.

This, then, I have not the least hesitation in saying, is the origin of the short-faced Antwerp. These are small pigeons with a short beak; more or less of the Turbit's gullet, and occasionally have a few feathers turned up on the chest something like the pearl of the Turbit or Owl pigeon; they are either blue or moody-coloured; they are good breeders, and not so wild as the former, and as they are good flyers, and more easily obtained, are much better known here. A cross with these and the Drogoun is generally used for dispatches in England; they are larger, approaching more to the make of the Drogoun, with shorter beaks, and scarcely any wattle, and I think are generally liked better for short journeys; for as an old flyer of pigeons from Calais to Dover informed me, "he liked the half-bred birds best, as the Drogouns, put more sense into them; for the Antwerps often over-flew themselves in their short stages."

There are several other crosses of little note, and, therefore, not worth mentioning; but I believe they are all known by the name of Antwerps.—R. P. BRENT, *Bessel's Green, near Seven Oaks, Kent.*

FUNGI AS USEFUL PRODUCTIONS.

Nor only are Fungi despised as articles of diet, but as useful or even interesting productions they too usually either pass unnoticed, or are looked upon as objects the sight of which is rather to be shunned than sought after. Nor is this to be wondered at, when we allow ourselves to be guided by the prejudiced opinions of others, who, in most cases, have no real knowledge of the good or bad qualities of those things they are condemning. That such a large proportion of the whole vegetable kingdom should spring up (at two periods of the year when vegetation generally is most dormant) and flourish and decay without rendering man any service, appears to me unreasonable to expect; and that the same should be allowed to perish unemployed, year after year, I consider cannot be too much regretted. In addition to the importance of Fungi as an article of diet, many might prove of great value for a variety of purposes, independent of their interest as objects of beauty and curiosity.

As medical remedies, we are well aware that many of the most active species, formerly in great repute, are now rejected and forgotten; but that many are employed at the present day by eminent members of the medical profession, and are considered to surpass some of the more modern discoveries which, in some instances, have taken their place.

The *Lycopodiums* are used for a variety of purposes, as stopping blood, which they do mechanically by means of their spores; and stupifying bees, which is done by the smoke arising from them when burnt. Also, as tinder they have been much used, and for this purpose are saturated with a solution of saltpetre and then dried. In northern countries, where the neighbours live far apart, they have been employed to convey fire from place to place. *Polyporus ignarius*, and *fomentarius*, are extensively used in the manufacture of Amadou, which is used for the following purposes: for staunching blood; as a material for paper making; and steeped in saltpetre to form tinder; it is also made into dresses by the inhabitants of Francoeur; is burnt by the Laplanders to protect their reindeer from the attack of gad-flies; it is used for surgical pads; and when sliced, and formed into extensive sheets, it has been employed lately by the medical profession to protect

the backs, &c., of the bedridden invalids, as it is more elastic than chamois leather, and less likely to crumple. It has been considered far superior to many substances in more common use, also, for a compress over varicose veins, as it supports the distended vessels without pressing too tightly upon the limb. The Swedish peasantry use Amadou to alleviate pain as follows: Wherever they suffer pain, they bruise some of the dried Fungus or Amadou, and pulling it in pieces, put a small heap of it on the part nearest the seat of pain; it is then set fire to, and burning away it raises a blister on the skin; and, although this may appear to some persons a rough method of treatment, it is generally a very successful one.

Salmasius describes the following method of making Amadou: The Fungus is to be first boiled, then beaten to pieces in a mortar, next hammered out to deprive it of its woody fibres, and lastly, being steeped in a solution of saltpetre, exposed to the sun to dry. (I should imagine that the saltpetre was omitted except when it was required for tinder.)

Polyporus squamosus forms a razor-strop superior to many patented ones in general use, when prepared as follows: Cut it fresh from the Ash-tree, in autumn, when it has become dry and hard; flatten out and press for twenty-four hours, then slice longitudinally, and with a piece of pumice stone ground flat, rub to a level surface those strips which are free from the erosions of insects, which may now be glued upon a wooden stretcher, and when dry will be ready for use.

Polyporus annuus is reported by the Swedish peasantry to be a cure for snake-bites. *Polyporus sulphureus* is employed in dyeing. *Tremella mesenterica* is reported to dye yellow. *Tremella fimbriata* has also been used in dyeing; and the Russians employ for dyeing those *Boleti* which change to blue or green colour when cut. *Agaricus atramentarius*, and other deliquescent species, have been used in the manufacture of ink and dyes.

Phallus fulidus may be considered more as an object of interest than a useful production, from its quick growth and rapid decay. It passes through its ephemeral existence unnoticed; and probably the strong odour which it produces, which is far more offensive than putrid flesh, induces many to avoid rather than seek by such a guide one of the greatest curiosities of the vegetable kingdom. Flies, snails, and slugs, are so fond of it as to flock to its resting place to regale themselves with the delicious food it affords; and had not provident Nature supplied us with a root which, like the potato, throws off offsets, it would soon become extinct. The offensive odour it produces is very great when diluted with the surrounding air, but hardly perceptible when brought in close contact with the nose, and in this manner it may be readily conveyed home for examination. The odour has induced some to believe that the taste is nauseous and highly poisonous. Those, however, who are bold enough, may eat them without fear; and it has been asserted, that the white stalk is rather agreeable than otherwise. F. Y. BROOKS.

CROSS-BREEDING AND DISEASES OF FOWLS.

Your correspondent, "A. S. W., Glasgow," suggests, in your December number, no doubt with the amiable intention of terminating the hitherto unceasing war that has prevailed between "fancy men" as to the merits of Shanghaes, Dorkings, and other varieties of poultry, the propriety of crossing some of the best breeds, in the hope of producing a class of birds that shall combine the multifarious qualities of all. And he himself has made the experiment of crossing a Shanghae cock with a Poland hen, the offspring of which he speaks most highly of. My object in addressing you, is not to find any fault with his very laudable efforts to improve his stock by experiments of this nature, but to caution him as to the unsoundness of drawing any conclusions from a first generation.

Now it is a well-known fact among sheep-breeders, that nothing is more unsuccessful than the attempt to perpetuate the stock of a cross-bred animal. They degenerate to a marvellous extent with every succeeding generation, until at last the sheep become quite weak and sickly, having none of the characteristics of purity and health. Arguing from

analogy, the Shanghai and the Poland will generate stock which will gradually become worthless in the course of a few seasons. To have the cross perfect, every bird must be of the first generation; the parents of each "mongrel" must be of the separate breed, whose good qualities it is our desire to combine. I do not say positively that such deterioration will take place with fowls; but there is much greater reason, *a priori*, for believing that it will, than that it will not. Therefore, let us endeavour to persuade our friend, "A. S. W.," to give us the result of his experiments in a few years time, after he has tried to perpetuate the stock of his cross-bred birds from one generation to another.

Permit me, now that I have pen in hand, to say a few words upon a "Subscriber's" treatment of a poor hen, labouring under "inflammation of the egg-passage." I verily believe he killed it; and as he is anxious to know from your readers whether he could have devised any better plan of treatment, I venture to suggest (*medicus sum*) that he had better have left the poor creature alone. A warm bath for a fowl! Who ever heard of such a thing? Wet, cold, and damp feathers would undo all the good, if any, that a warm bath might have effected. If simply he had wrapped the hen in warm flannel, and placed it before the fire, without irritating the poor wretch with tartar-emetic, calomel, and rhubarb, this hen whom he now mourns might still have been the pride of the harem. I do most positively believe (and I hesitate not to declare it) that hundreds of animals of different kinds are yearly killed by the over-officiousness of their anxious possessors. There is a disease, to which pigs are peculiarly obnoxious, bearing, with the vulgar, the elegant name of "the staggers." And, in my slight porcine experience, I have lost several by this, or rather by meddling with this malady. Bleed him and purge him, say the learned. I have done so, and they have invariably died. But last summer, "the staggers" threatened my little farmyard again. But no more bleeding and calomel for me. Keep him warm, and leave him alone, was my motto; and the only two pigs attacked recovered. This may be a mere accidental coincidence. I do not say positively that it is not. But still it has been a lesson to me; I will not meddle with Dame Nature any more. This position is equally tenable with fowls, and I am sure it is with humanity. More than half the people who complain would get well without a physician; but they will send for him; and, getting credit for spontaneous cures, like Helinda's Betty, the Doctor is "praised for labours not his own."—EDGAR SHEPPARD, *Enfield*.

[With what Mr. Sheppard says relative to cross-breeding, we entirely concur; but not so as to leaving poultry to "Dame Nature," if they are seriously disordered. Warmth and change of diet will usually do much for them, but we have seen too many cases of cure in all our domestic animals, not to know that medicine can do much in arresting the progress of their diseases. We wish any of our readers who have a hen egg-bound would try the effect of giving her ergot of rye. Three five-grain doses of the powder, mixed with a little meal and water, at intervals of ten minutes, might be sufficient.—ED. C. G.]

BOUQUET D'AMOUR.

THERE is but one step between the sublime and the ridiculous. No wonder the cook thought so; for I was in a towering passion one morning, to find the mince-pies spoilt again; not baked enough! and after such repeated tuition, striving to impress her with the tact and economy of the thing (*viz.*), directly the bread is taken out of the oven it merely requires a small quantum of fuel to engender renewed heat, sufficient for the baking mince, or any other fragile pies of that order whatsoever. Alas! for bachelors' orders; "what should they know about orders?" * * * * * However, the mince-pies were not "half-baked," and the demon possessed the man. I dare not reiterate what I said on that painful morning; but what I did, I state to my own shame and satisfaction.

I procured fresh wood in a fury; I caused the oven to become heated in a fury; and the oven roared; and I furiously roared at the cook, stentorating, that if she did not choose to make pies according to specification, and bake them properly,—a nice healthy brown, fit for christians to

partake of,—so soon as that particular quantity of wood had exploded, I would come and do them myself!

Wonderful! Now I seriously think of it, it certainly was wonderful. The cook did make and bake some fresh pies beautifully, without retaliating a single word. No, she did not even shake her fist at me! I presented her with a glass of port in the evening; she deserved a bottle; but, as I was going to observe, in the height of all this hubbub, I strode with measured steps, though not slow, into the garden, thoroughly disgusted, wreaking anathemas; and as far as my recollection serves me, consigning cooks and bachelors establishments to the possession of all the caloric powers.

A change comes o'er the spirit of this rage. In one instant the tide of my vituperacious anger was turned to shame and sorrow; and how? Why, at that single love-beaming glance of a pure inoffensive flower, a Christmas rose, peering laughingly at me through a hand-glass, which I had placed over it as a protection from the winter storms. Often and often have I experienced the same fascination, become humanised as it were with this sweet fellowship; and I have more than once thought, if ever I should have the misfortune to lose my faculties, that the sudden presentation of a beautiful flower, would, in preference to anything, tend to the resumption of my reason.

The fair rose became at once endeared to me; it must be culled and placed by my fireside, and remain there cherished and loved for the future of its existence. I secured the humble admonitor, and communed with it, as I suppose most other people would do, who ever cull a flower with the like feelings.

A thought! Another!! It is done. I gently insinuate these Russian violets between each leaf of my Christmas rose, and secure their stalks to the rose-stalk tenderly with sewing cotton, introducing into the cup of the flower as many violets as can be pleasantly passed without very much distorting the petals of the rose, carefully allowing the pistil and stamens to remain fully exposed in the centre. I then procure the largest and most rounded violet leaves, and place them as a circled foundation directly beneath the white petals of the rose, when it represented, according to my idea, the appearance of a new and beautiful passion-flower; a bouquet, not for the hand, but worthy to present to a lady and become secured on her bosom.

My interpretation reads thus—

BOUQUET D'AMOUR.

Evergreen as a foundation, enrayed with pure spotless white; centre true blue, with the gentlest sparkle of yellow (jealousy; and where is true love ever found without it?), showing itself in just proportion, by the peeping stamens of the rose.

I really think Covent Garden ought to sport this bijou; it should, and just possibly would, cause a run amongst the bachelors. My own sweet pet is wafting its odours in the desert of my solitary room, and chiding me even now.—F.

SINGULAR ATTACHMENT.

I HAVE a small white cockatoo, and a rough-haired terrier dog, which have formed a mutual attachment for each other; the affection of the bird is, however, perhaps the strongest. No sooner does the dog, who sleeps in the stable, make his appearance before the parlour-window of a morning, than the bird is all anxiety and restlessness to get at him; and when he is admitted into the room, she will fly down from her perch, and welcome him with the utmost delight, and testify her joy by expanding her wings, rubbing against his legs, and nestling herself as close to him as possible. He, in his turn, licks her over, takes her into his mouth, and is very careful not to hurt her. They lie together upon the hearth-rug, or upon a chair. When let out into the garden they gambol upon the grass-plot; and she attends him in his rounds about the premises. My sitting-room has folding doors, which are generally open most of the day during the summer, and the bird has free egress and ingress as she pleases, and being strong on the wing, much of her time is spent in the shrubberies, or on the tops of our highest trees. It is a beautiful sight to see her winging her flight, along the face of the dark line of

foliage, or performing her evolutions high up in the air; at these times, when called to, she will suddenly make a turn, and with expanded and motionless wings glide down and alight upon the hand which is held out to her. She is very fond of attending upon her mistress when engaged in gardening; and if I happen to be at a distant part, will sail backwards and forwards, from one to the other, alighting upon our shoulders. Being light, her aerial movements are very graceful, far surpassing those of the common pigeon. She is also pleased at being noticed, and fond of strangers. That destructive propensity so often observed in the species results much from confinement, and is scarcely perceptible when they enjoy perfect freedom.—S. P., Rushmere.

TO CORRESPONDENTS.

FRUIT TREES (A Novice, Lutterworth).—The quality of fruits depends entirely on the localities where they are grown; and so, as some, *thecurr* *Diel* is only a second-rate pear, while in others it is of the very finest quality, as is the case with you. Generally speaking, in all situations south of Derby it is a first-rate fruit, rarely to be surpassed; but we know that in the northern counties it is only second-rate. We should not suppose the climate of Lutterworth unfavourable to the cultivation of French pears; but from what you say of the "bottling" being dry, may in some measure account for your want of success. Although it is absolutely necessary for the cultivation of pears that the soil should not be wet, still, at the same time, it should be moist. There are some of these loamy soils you speak of, which have a dry gravelly bottom, that acts like a cullender in draining off every particle of moisture as it falls; and we suspect that is the disadvantage you are labouring under. It is not the climate, therefore, but the soil. You do not say whether you want dessert or kitchen Apples, we, therefore, send you four of each, as follows:—Kerry Pippin, Court of Wick, Wylen Pippin, Sturmer Pippin, Wormsley Pippin, Guden Winter Pearmain, or King of the Pippins, Dumelow's Seedling, Gooseberry Apple. The Pears we would recommend you, are Dunmore, Jersey Gratioli, Haeon's Incomparable, and Nellie d'Aliver.

SHANGHAI.—T. A. says, "I am still of opinion that there are no black or pure white thoroughbred Shanghai fowls in England, and should be glad, therefore, to know what may be Mr. W. Lort's, or his friends', powers to convince me of my error, and prove that there are any of either. The word 'imported' is so commonly used in these days with reference to China fowls, that it goes for nothing."—Why does not our correspondent write to Mr. Lort?

GESNERA, SUTTONII ALBA (L.).—This, after doing well, came to at stand still, and did not grow. On examining the roots they were found covered with mealy bug; what is the cause of this? We might write pages, and not be able to satisfy you or ourselves either. Most likely the bug came with the plant. You are fortunate that the vermin are confined to the roots, as such a pest was sufficient to give you trouble for years to come. If you are sure that none are on the top of the plant, and only there, take off a few cuttings to save the sort if you acquire it; but that done, pinch off and plant and all into the nearest fire you can reach, and that without a moment's prying. Even though you see nothing on the cuttings, wash them well with soap and water. The safest plan would be to sacrifice the whole. You could not have a worse intruder.

PLANTANA MUTABILIS (T. A. F.).—You treated it as a greenhouse plant, and it is growing freely but not blooming. (This we are rather surprised at. To grow freely at this season requires a warm greenhouse, such as that mentioned to-day by Mr. Fish. In such circumstances, and in a light position, it blooms as it grows. Treated as a greenhouse plant, it is most useful for summer blooming; and allowing it to become, in a temperature of about 45°, deciduous in winter. In March or April it should be cut back, as soon as you see the buds breaking; as freely as you would cut a rose, shifted and kept close for a few weeks in a temperature not less than 50°. When removed to the greenhouse about June, it will bloom freely until the end of October. Full details as to greenhouse management have already been given. Loam, peat, and a little charcoal, will grow it in fine style. During the summer it may either be top-dressed with rotten dung, or watered alternately with manure and clear water.

ORANGE-TREE (X. Y. Z.).—This is blooming, but lost all its leaves, and the twigs are getting mouldy, and fruit always falling off when the size of peas. This has been planted against the back wall of a greenhouse, in a border well drained; in soil, good loam, leaf mould, and sand; and watered occasionally with manure water. Now we must require to know more as to access to light and heat before advising; meantime, we would give no more manure waterings; next, we would examine the soil, and see first if it is not sodden, notwithstanding the drainage; and next, if it is not very dry after going a few inches from the surface. In either case we would replace with fresh soil, and put for such a plant, might be substituted for leaf-mould. Then the position should be examined. We should almost conclude your plant was shaded in summer, and in a low temperature in winter. A plant can only endure the latter, and carry its foliage nicely, when it has full light and a rather high temperature in summer. To get an orange plant not only to flower, but to fruit, and be healthy against the back wall of a greenhouse, you must not only give it full light in summer, but a higher temperature than would suit most greenhouse plants, most of which would be better, however, in pits or out-of-doors. Then Mr. Fish gave full directions on this subject in an early volume; but the above will, we think, meet your case; if not, tell us, and be more explicit.

EYED-NAILS FOR TRAINING WALL-TREES (T. HUC).—We did not say that your nails, of which we gave a drawing, would be more liable to

cause friction to the branches than others. One thing is quite certain; no gardener can fasten a branch so close to a wall by tying, as he can by the common mode of nailing with a shroud. The branches, therefore, are liable to a freer and greater motion, and if the chafing, which would consequently arise if a wire is used, be not obviated in some way, no gardener will use them. We believe it would be obviated by using a strip of lead as broad as the eye would admit, and twisting the ends; thus boring, as it were, the branch as tight as can be, by such a mode of training. In answer to your query, apply to a glass-dealer (we forget his name) within three doors of the Angel, Islington.

DUCKS (J. S. K.).—For a small garden buy a pair of Teal. You may obtain them of the dealers in fancy fowls.

NUTT'S CHERRY (J. T.).—Why not write to Mr. Nutt for one of his shilling packets? He advertised in our pages a few weeks ago, and you will there see his address.

SHANGHAI FOWLS (A. B. C.).—We cannot answer for the goodness of specimens we have never seen. Price varies capriciously with amateurs. We saw specimens marked at one guinea per pair, at the Great Metropolitan Show, which we would have selected in preference to others priced by their owners at ten times the amount.

POTTING SAND (J. P. B.).—Our correspondent says that what we called "Killing sand," at page 274, ought to be, "Killiney sand," and he wishes it to be corrected, because "to numbers here (Dublin) the information will be equally valuable."

DORKINGS (J. B. F.).—Capt. W. W. Hornby, Knowsley Cottage, Prescott, Lancashire.

PARALYSED LIME (A Lover of all that is Handsome).—When a fowl loses the use of its legs, as in the case of your hen, we have never known any remedy that even mitigated the symptoms. We will recur to this case.

SPANISH FOWLS (A Subscriber, Leek).—The pure variety is in single-combed.

CHALLENGE (J. C. D.).—If we inserted it we should have to pay the advertisement duty.

WORK ON POULTRY (H. H.).—See an advertisement to-day. The disease of which your poultry have died since their return from Birmingham must be some violent inflammation. We will mention the case again.

REMOVAL OF HOTHOUSE (L. Y.).—If attached to the wall, or to the foundation, it cannot be removed without the landlord's consent, but you might take away the door, and the moveable windows probably.

HEATING CUCUMBER-BED (Old Subscriber).—What is the heat in the pipe; and what the aspect?

DISEASE IN PIGEONS.—We are very much obliged by the following:—"Though I cannot inform J. of the cause of the disease with which his pigeons are affected, yet it may be acceptable to point out a means of removing it. As a boy, I kept pigeons in large numbers, and the disease J. T. alludes to was common among them; indeed, so much so, that I have removed the lumps from the neck of as many as seven birds in one morning. The plan I pursued, was to make a cut longitudinally over the lump, to scoop out the contents, and then to rub the interior of the wound with either tincture of iodine, or riga balsam, then at once securing the edges together. There was generally considerable bleeding at the time, and for that reason I preferred that my pigeons should be of some size and strength before I operated upon them. If the whole of the kernel was not removed, I found it grow again, and need a second operation. The doing this was not unattended with danger, the proportions of deaths being about two in five. I remember shooting some Wood-pigeons which appeared to suffer from the same disease, the flesh having the same peculiar rank smell, and being quite uneatable. I am now speaking of how I treated pigeons some years ago, and there may be now an easier or safer method, and if so, it must be known to our most celebrated pigeon-fanciers, whose addresses could be obtained without difficulty, and whose courtesy would, doubtless, reply to a polite enquiry."—A. Lort, Ward End, near Birmingham.

FERN SHOOT AS A KITCHEN VEGETABLE.—A correspondent (Rector) says, "I enclose you the following extract from Huc's Travels in Tartary. Will you be kind enough to say whether you have ever known the young stem of the fern cooked as a vegetable." (vol. v, p. 85). "Another dish, not less distinguished in our esteem than the preceding, was furnished by a plant very common in France, and the merit of which has never yet been adequately appreciated: we refer to the young stems of fern; when these are gathered quite tender, before they are covered with down, and while the first leaves are bent and rolled up in themselves, you have only to boil them in pure water to realise a dish of delicious asparagus." Have any of our readers any experience as to the palatableness or wholesomeness of such a dish?

RURAL CYCLOPEDIA (W. W. W.).—We have never seen this work. We know where Shanghai eggs from the best buff straws may be had at eighteen shillings the dozen, package included.

ILLUSTRATIONS OF DOMESTIC POULTRY (Practical).—It is published at Birmingham; when ready for general distribution we have no doubt that it will be advertised.

NAMES OF PLANTS (G. A.).—Your plant is *Rochia falcata*, being named after La Roche, a botanical author. The spots or blotches upon the points of some of its leaves may be caused by changes the plant may have suffered from too much watering at the root, or thoughtlessly over head with other plants. It should not be over potted. Soil, sandy loam, with pounded bricks, old mortar, or charcoal dust mixed with it, and the pots well drained, and kept upon a drishelf near the glass; giving a very little water during the winter, and never over the leaves of the plant at any season. (N. T.).—We think No. 1 *Erica viridescens*, No. 2 *Erica acuminata*, but the specimens are small and damaged. (D. A. A.).—Your plant is the *Chenopodium purpureum*, an account of which you will see in the Dictionary. We have it out-of-doors under a south-east very full of flower-buds in a forward state at this time.

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Being the Results of Personal Observation and Practice.

BY

THE REV. W. W. WINGFIELD,

HONORARY SECRETARY OF THE PENZANCE POULTRY EXHIBITION;

AND

GEORGE W. JOHNSON, ESQ.,

EDITOR OF "THE COTTAGE GARDENER," AND HONORARY SECRETARY OF THE WINCHESTER AND SOUTHERN COUNTIES SOCIETY FOR THE IMPROVEMENT OF POULTRY.

UNTIL within the last ten years, it is not an exaggeration to say that the improvement of Poultry was totally neglected in this country; and it is only since the year 1848 that we have been aroused to a correct appreciation of their value. Every one who now directs his thoughts to the subject at once acknowledges that Poultry are just as capable of improvement as any other kind of farming stock, by breeding from select specimens, and the consequences of this conviction are apparent in the facts, within our own knowledge, of twenty guineas being given for a Shanghai cock, and one hundred pounds for twenty Spanish chickens. The beneficial results arising from this attention to superior parentage are already very marked; and no one conversant with Poultry can attend the Exhibitions of them now held in every district of the kingdom without seeing collected evidence of increased and increasing improvement. At the same time, every specimen affords testimony, quite as apparent, that much remains to be accomplished. For information how this further improvement is to be achieved—for an authority deciding what are the defects to be avoided and the excellencies to be aimed at—for sound directions in management—for accurate particulars of the good and bad characteristics of varieties—for such information, and for information on other points, too numerous to be particularised in a prospectus—all naturally turn to the works published relative to Poultry. Now we all know that no one has sought such aid without being disappointed.

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|--|--|
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| 2. Description of Varieties. | 5. Management of the Setting Hen. |
| 3. Poultry-House and Yard. | 7. Management of Chickens. |
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In each section the Authors give not merely their own experience, but that of some of the best breeders in this country, and they need only mention EDWARD BOND, Esq., THOMAS STURGEON, Esq., Captain HORNBY, and CHARLES PUNCHARD, Esq., as being of the number who have most kindly and liberally contributed information. The Diseases of Poultry will also be found to be treated in a mode very different from the old empiricism which characterises previous publications.

The Work will be published in Five Parts, Price Half-a-Crown each, at intervals of Two Months. Each Part, besides Woodcuts, will be illustrated by Two or more minutely Coloured Portraits of selected specimens of each variety of Fowl.

PART I.

THE SHANGHAI OR COCHIN-CHINA FOWL

Will be Published on the First of March 1853.

LONDON: WM. S. ORR & CO., AMEN CORNER, PATERNOSTER ROW.

THE COTTAGE GARDENER,

AND

COUNTRY GENTLEMAN'S COMPANION.

CONDUCTED BY GEORGE W. JOHNSON, ESQ.

No. 226.]

THURSDAY, JANUARY 27, 1853.

[PRICE 4d.]

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THE WESTERN SEED ESTABLISHMENT—WILLIAM RENDLE & CO. Seed Merchants Plymouth, have much pleasure in stating that they have this season a fine and well-selected stock of all kinds of Kitchen garden and Flower Seeds, in the best possible condition harvested by themselves and by growers of high reputation. In consequence of the unfavourable weather for ripening seeds, during the past autumn, the stocks of some sorts of seeds are very small and the prices in the trade consequently much higher, yet we shall not make any corresponding advance, but supply all kinds of kitchen garden and Flower Seeds on the same terms as last year.

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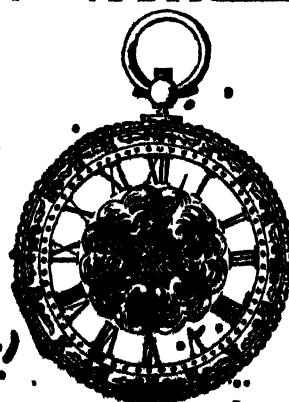
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THE COTTAGE GARDENER—ADVERTISEMENTS.

COCHIN-CHINA FOWLS.—Mr.

J. C. STEVENS begs to announce, that the next Periodical Sale of FANCY POULTRY will take place at his Great Room, 38, King Street, Covent Garden, on Tuesday, February 1, commencing precisely at 12 o'clock.

The Cochin-Chinas are many of them very choice, light-coloured, and well-feathered.

Catalogues will be forwarded on receipt of a stamped directed envelope, enclosed to Mr. J. C. STEVENS, 38, King Street, Covent Garden.

N.B.—These Sales will be continued throughout the Season, on the First and Third Tuesdays in every month. Amateurs wishing to include any Birds in the Catalogues may have a Form of Entry on applying to Mr. J. C. STEVENS as above.

SHANGHAI AND OTHER FOWLS, FOR SALE OR EXCHANGE.

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No charge for packages to London.

BRAHMA POOTRA FOWLS.—

As many of the readers of THE COTTAGE GARDENER may have been disappointed at not having seen Mrs. Hoar Williams' pair of Brahma Pootra Fowls at the Metropolitan Show, I wish to say, through the medium of your columns, that, since the Birmingham Exhibition, Mrs. Williams has kindly gratified my wish to be the owner of these beautiful birds, and that on my purchasing them the entry for exhibition in London was withdrawn, to enable me to exhibit at the Cornwall Society's Show on the 10th instant.—R. H. BOWMAN, Rose Vale, Pensance.

TO POULTRY AMATEURS.—

The best Food for Cochin-China Fowls is SMITH'S mixture of Indian Corn, Wheat, Hemp-Seed, Buck-Wheat, Peas, Scotch Oats, and Barley, 30s per quarter, or 4s per bushel, to be had of W. R. SMITH, Corn Merchant, 2, Windsor Place, Old Kent Road, and at J. AUSTIN'S, next the Welch Ale Brewery, Old Kent Road.

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One of the Hives has a Thermometer in, and two of them have Bell-Glass.

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PASS AND BROWN'S SEED AND PLANT LIST FOR 1859, with the usual full descriptive information, is now complete, and supplied free for 3 penny stamps. We have the pleasure of presenting our Twenty-second Annual Seed Catalogue, accompanied with our usual choice Lists of Plants. Our Seeds, which are harvested and collected with much care, will be found, we believe, as select a collection of choice varieties and kinds as can be produced. From the great number of communications from persons in all parts of the Kingdom to whom our goods have been sent, expressing their high approval of the articles supplied; and from our habitual aim to obtain those of the very best description, we can offer them with the fullest confidence.

SEEDS IN ASSORTMENTS.

The following of our own selection we wish particularly to recommend. They consist of varieties and kinds which cannot fail to please, and including many new and important additions.

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These may be had, prepaid by post, at the prices affixed. Useful printed instructions for sowing and raising Seeds will be sent with each lot.

100 Varieties select showy Annuals, including very splendid Prize		
Asters, Stocks, Larkspurs, Jacobins, Zinnia elegans, also the		
New Californian Collinsia, Nemophylla auritia oculata, and		
a large number of the newest and best sorts	£6	15 0
50 Vars., including the same	0	8 6
20 Vars., ditto	0	5 6
20 Vars., ditto	0	4 0
20 Vars. best Dwarf Annuals, in large packets, for filling beds on lawns	0	7 6
12 Vars. ditto	0	5 0
20 Vars. choice Greenhouse Annuals, including very fine Balsam,		
Mesembrianthemum, Martynia, beautiful new vars. of Phlox		
Drummondii, new vars. of Portulacca, Rhodanthe Mangisii		
Thunbergia, the New Salpiglossis atroangulata, and New		
Yellow, &c.	0	7 6
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Stock, &c., 7s 6d	0	5 0

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100 Varieties select and well-assorted Showy Annuals	10	6
50 Vars. ditto	5	6
20 Vars. ditto	2	6
20 Vars. Hardy Biennials and Perennials	4	0
12 Vars. ditto	2	6

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No. 4, a collection of esteemed kinds for a small garden	0	10 6

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THE AUTUMN CATALOGUE also supplied for 3 penny stamps. The cost of Catalogues may be deducted from orders.

In order to reduce the cost of transit to distant purchasers, we have now made arrangements to deliver goods to the amount of 20s, and upwards, free to all the stations in London; also sent free, as before, to Chesham, Colchester, Ipswich, and all stations on the same line from London to Norwich.

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MESSRS. JESSOP offer EGGS of any of the above with great confidence, each variety being kept carefully separate, and constantly under their own inspection.

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Estimates, or any further particulars, will be forwarded upon application.

WEEKLY CALENDAR.

M D	W D	JAN. 27—FEBRUARY 2, 1853.	WEATHER NEAR LONDON IN 1853.				Sun Sets.	Moon R. & S.	Moon's Age.	Clock aft. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in In.					
27	Th	<i>Dromius pusillus</i> ; bark.	29.553—29.467	46—29	S.	28	48 a. 7	38 a. 4	7 26.	13 8	27
28	F	<i>Demetrius atricapilla</i> ; bark.	29.583—29.736	45—21	N.W.	—	47	40	8 44	13 19	28
29	S	<i>Hyphidrus ovatus</i> ; ponds.	30.090—29.938	46—24	S.W.	04	45	42	10 5	13 30	29
30	Sun	<i>SEXAGESIMA SUNDAY.</i>	29.979—29.934	53—29	W.	11	44	44	11 26	13 39	30
31	St	<i>Hilary Term, ends.</i>	29.919—29.510	52—39	S.	14	43	45	12 0	13 48	31
1	Tu	<i>Podura plumbea.</i>	29.996—29.717	57—39	S.W.	04	40	47	1 47	13 56	32
2	W	<i>PURIFICATION DAY.</i>	30.003—29.860	53—35	S.W.	06	39	49	2 30	14 4	33

METEOROLOGY OF THE WEEK.—At Chislewick, from observations during the last twenty-six years, the average highest and lowest temperatures of these days are 44.1° and 31.7° respectively. The greatest heat, 66°, occurred on the 28th, in 1846; and the lowest cold, 10°, on the 2nd in 1847. During the period 101 days were fine, and on 81 rain fell.

ROSE-COLOURED TACSONIA.

(Tacsonia sanguinea.)



For a very full history of the genus *Tacsonia*, and the culture of some of its species, we must refer our readers to pages 5 and 316 of our fifth volume.

The species before us has been until now imperfectly known. About fifty years since it was described by Sir J. E. Smith, in Rees's Cyclopædia, as *Passiflora sanguinea*, and Decandolle, in his "Prodromus," first called it *Tacsonia*

sanguinea, but entirely from Sir J. E. Smith's description, and there is little doubt but that *Tacsonia quadriglandulosa*, *quadridentata*, and *pubescens*, in the same work, are really the *sanguinea*. It was first flowered in this country during last July, by Mr. Hugh Low, of the Clapton Nursery, and it is figured in the *Botanical Magazine*, t. 4674. Mr. Low received it from Trinidad, and the gentleman who forwarded it, H. Rye, Esq., called it *Passiflora diversifolia*. It is to be regretted that *sanguinea*, not being wholly inappropriate, must be retained as the specific name, for *diversifolia* (various-leaved) is descriptive of its very marked peculiarity of foliage, whereas "blood-coloured" is equally applicable to the flowers of some other species. The leaves vary in form, not only upon different, but upon the same plant, some being oblong-egg-shaped, and others heart-shaped, and three-lobed; the edges are always more or less wavy, and unequally toothed; the under-side strongly net-like, owing to the projecting nerves; sometimes downy, but always pale green, whereas the upper-side is always dark green, and usually smooth; the leaf-stalks are about half-an-inch long, with glands at their base, and sometimes in the waves of the leaves. Flower large, with five narrow, taper-pointed sepals, terminating in a pliable awl-shaped awn; sepals outside, partly green and rose-coloured, but inside uniformly rosy. Petals five, and like the sepals, but rosy-red on both sides. Crown, or nectary, double, short; the inner white, and membranous, fringed with red erect rays; the outer of a circular row of filaments or threads, white, lanced and tipped with red. Column three or four times longer than the crown, with short threads, bent back, and the whole greenish, spotted with red. Anthers red. Styles deep red, with green stigmas. (*Botanical Magazine*.) J.

RESUMING our biography of the Pear from where we left off, at page 276, we will begin by replying to a correspondent's enquiry (Norton)—"On what grounds we say that the Romans had a very accurate knowledge of its cultivation?" We shall not stop to gather together the fragments of information sustaining our opinion, which we find scattered through the works of Cato, Columella, and Varro, but will turn at once to what is said by the brothers Gordian and Maximus Quintilius. They flourished in the second century, and in fragments of their writings, in the "Libri xx. Geoponicorum," we find that they recommend for the Pear a cool and damp soil, adding, that if the fruit is gritty, the soil should be improved, and well watered; a recommendation also given by Palladius. Diophanes, who wrote before Columella, Varro, and Pliny, for they quote from his writings, directs that they must be planted in a mild situation; that to promote fruitfulness, some of the main roots should be split, and the fissure kept open by a wooden wedge; and that if languid, they should be manured with the refuse of the wine-press. The Romans had their Mr. Rivers, or advocate for dwarf

Pears, for Tarentinus directs them to be grafted on the Quince (*Malus cydonia*). We might enlarge our extracts demonstrating that they knew how to propagate this fruit by cuttings, a lost art, but recently said to be re-discovered; however, we have quoted enough to justify our statement, and will at once proceed to examine what our earliest English herbal-writer, Dr. Turner, says about this fruit-tree.

In the second part of his "Complete Herbal," published in 1562, he remarks, "We have many kinds of garden Pears with us in England, and some kinds better than ever I saw in Germany for wholesomeness; and some in Germany more pleasant and greater than ever I saw in England. I have read in no old writer so many kinds of pears as I read of in Pliny, whereof I will show certain Latin names, and compare them with our English Pears and Dutch Pears as well as I can. *Pyræa superba*, that is to say, Proud Pears, are little and soonest ripe; and these are called in Cambridge, Midsummer Pears. *Faleria pyra* have their name, saith Pliny, because they be full of juice. These are called, in some places, Watery Pears, or Moist Pears. *Dolobelliana* are the pears that

have long footstalks. I remember not how they be named in England. *Valema*, whereof Virgil makes mention in the second book of his Georgicks. These, because they are very heavy, as Virgil sheweth, and very great, as their name betokeneth; for they seem to have their name of *vola*, that is, the hollow place or loof of a man's hand, because they be as big as a man can grip in the palm or loof of his hand. These are commonly called in English, Wardens, if they have a binding and be red when they are roasted, and endure unto March or February. It appeareth that they have their name of long keeping; for Warden, in Dutch, from whence our English came, is to keep. *Seratina pyra* are they that hang upon their mother until winter, and were ripe with the frost. These are partly our Wardens, and partly other long-during Pears, which are called in Dutch, Winter Biren; and they may be well called in English, Winter Pears."

Next in order of time came Gerarde, who says—"The stock, or kindred of Pears are not to be numbered; every country hath its peculiar fruit. Myself knows one curious in grafting and planting of fruits, who hath in one piece of ground at the point of three-score sundry sorts of Pears, and those exceeding good, not doubting but if his mind had been to seek after multitudes he might have gotten together the like number of those of worse kinds." Johnson has altered Gerarde's arrangement of the Pears he specified, and they give the following as the ancient titles, and our Pears which are synonymous. Whether correct or not in that respect, they certainly shew eight varieties then known in our gardens, and some of which are still surviving. 1, *Pyrus superba*, Katherine Pear; 2, *Pyrus praeocia*, Jonneting Pear; 3, *Pyrus Jacobaea*, St. James's Pear; 4, *Pyrus regale*, Pear Royal; 5, *Pyrus Balastrinum*, Bergamot Pear; 6, *Pyrus Cydonia*, Quince Pear; 7, *Pyrus episcopata*, Bishop's Pear; 8, *Pyrus hyemale*, Winter Pear. "All these," says Gerarde, "and many more, and those most rare and good, are growing in the grounds of Master Richard Pointer, a most cunning and curious grafter and planter of all manner of rare fruits, dwelling in a small village near London, called Twickenham; and also in the ground of an excellent grafter, and painful planter, Mr. Henry Banbury, of Touthill Street, near Westminster; and likewise in the ground of a diligent and most affectionate lover of plants, Mr. Warner, near Horsey-down, by London." It would not avail much now to seek for Pear Trees, either in Tothill-street or Horseleydown!

COVENT GARDEN.

SOME weeks ago, and for several consecutive weeks, we devoted our attention to the consideration of the more extended cultivation of the best varieties of Flemish Pears, and urged on our readers the importance of this new branch of rural economy. The more we think of the subject, the more we are impressed with the idea that it is one which must, ere long, engage the attention of occupiers of land in a way which it has never done before. We have already mentioned fully the varieties

which are best-adapted for planting as standards; but, as stated last week, there is another aspect in which we must look upon this class of fruits, and that is with regard to their supplanting Peaches, Nectarines, and Apricots, in soils where these do not attain perfection, or where a crop is so uncertain as to be always incurring suspense or disappointment. We stated in our last that we knew several instances which have lately come under our notice where these more tender fruits were rarely ever brought to perfection; and it appeared to us that the only object for occupying valuable wall-room with them could be no other than simply to have it said that such trees grew there. And in one of those very gardens, even so early as Christmas, there was not such a thing as a Pear to be had. A fruit-room there certainly was, but its shelves were occupied with a few miserable-looking apples, such as a costermonger would hardly exhibit on his truck. There are two causes which conduce to disappointment in the cultivation of the fruits of which we have spoken, and these are, soil and climate. It frequently happens that, even where there is a congenial climate, the soil is cold and heavy; and again, on the other hand, when the soil is all that could be desired, the climate may be cold, the summers short, or the situation exposed. Now, in all such cases, unless considerable expense is incurred, Peaches, Nectarines, and Apricots cannot be cultivated to advantage; and it is the space which these would otherwise have occupied that we wish to have appropriated to the more choice and valuable varieties of Flemish Pears, and particularly to those which come into maturity at a season when there is no other fruit to be had. We should imagine there are few who would not prefer a delicious melting *Passe Colmar*, or *Nelis d'Uiver*, at Christmas, to a poor, insipid, worthless Peach in September, and that, too, at a season when so much good fruit can be had without any trouble. All, therefore, who are labouring under such disadvantages as we have stated, we would counsel to abandon their present course, and occupy their walls with such varieties of pears as we shall now recommend.

In making out these lists we shall not include any of the early varieties. These can always be had in abundance during the early autumn; and as it is the late sorts to which the greatest value is attached, we would advise that they only should have occupancy of the wall.

FOR A NORTH ASPECT.—It rarely happens that Pears are ever placed in this situation. In all well-regulated gardens such an aspect is always employed with Morello Cherries, Currants, &c.; but, lest it should happen that there are cases where neither of these do succeed, a trial may be given to *Marie Louise*, *Haddon's Incomparable*, and *Thompson's*.

FOR A SOUTH ASPECT.—We have here an opportunity, on a south aspect, where the soil and climate are good, of enjoying these most delicious of the old French Pears, as the *Brown Beurré*, ripe in October; *Crassane*, ripe during November and December; and the *Colmar*, or *Poiré d'Auch*, in use from November to February. For these the soil must be light and warm; in northern

parts the south aspect is preferable, but in the south they succeed well either on south-east or south-west walls. To those already named may be added, *Passe Colmar*, *Glout Morceau*, *Nelis d'Hiver*, and *Beurre de Rance*.

FOR AN EAST ASPECT.—In good situations in the south, *Passe Colmar*, *Glout Morceau*, *Forelle*, a delicious and most beautiful variety, sparkled like a trout; *Beurre Diel*, *Ne Plus Mouris*, *Nelis d'Hiver*, *Easter Beurre*, and *Beurre de Rance*. To which may be added, for more northern situations, *Thompson's*, *Knight's Monarch*, and *Haddon's Incomparable*.

FOR A WEST ASPECT.—There is no variety we know of does better on a west wall than the *Glout Morceau*. *Napoleon* also succeeds admirably. To these may be added the ever-to-be-desired *Passe Colmar*, together with *Marie Louise*, *Alphonse Grassanne*, *Haddon's Incomparable*, *Nelis d'Hiver*, *Easter Beurre*; *Jean de Witte*, a most excellent late variety, coming in between the *Easter Beurre* and *Beurre de Rance*. This deserves to be better known, and more extensively cultivated; it is one of Van Mons's best varieties. The *Beurre de Rance* should also have a place here and everywhere else where it will succeed.

This is a subject to which we shall have occasion to recur again, but as the season is now rapidly advancing, and all planting work should now be seen after, we have considered it advisable to furnish our readers with a list of the best varieties for wall culture, that they may lose no time in making the necessary preparations.

The trade of Covent Garden is now even worse than it was before Christmas. Every description of produce is most abundant; indeed too much so, there not being buyers sufficient for the supply. These remarks refer to VEGETABLES. *Savoy*s are making from 6d. to 1s per dozen. *Brocoli* has been very plentiful, bundles containing as many as twelve heads, fetching no more than from 3s to 1s per dozen. *Greens*, 1s to 1s. 9d. per dozen bunches. *Brussels Sprouts*, 1s. to 2s. per half sieve. *Turnips*, 1s. to 1s. 6d. per dozen bunches. *Carrots*, 2s 6d to 3s. per dozen bunches. *Celery*, 6d. to 1s. per bundle. *Onions*, 3s. per bushel. There is still a good supply of forced *Rhubarb* at 1s. per bundle. *Seakale*, 1s. to 1s. 6d. per punnet. *Asparagus*, .5s. to 8s. per bundle. *New Potatoes*, 6d. per lb.

IN FRUIT the supply is short. *APPLES* are rising again in price; very ordinary samples of culinary sorts make from 4s. to 7s. 6d. and 8s. per bushel; and dessert varieties as much as from 7s. 6d. to 14s. Those which produce the latter price are the *Golden Knobs*, a fine little russety apple, which is grown extensively in Kent, and which do not come to market till about this time. This would be a profitable variety for orchard planting; not but what there are many which are far superior to it, but being a good keeping sort, it comes in at a season when there are few good kinds in the market.

The supply of PLANTS and FLOWERS is good, and the demand is brisk. They consist of *Camellias*, *Heliotropes*, *Hibiscus*, *Polyanthus*, *Primulas*, *Tulips*, *Chinthe Primrose*, *Lily of the Valley*, *Aconites*, *Cinerarias*, *Euphorbia*, *Jacquiniflora*, *Azalea indica alba*, &c. H.

GOSSIP.

MR. BAILLY informs us that the statement at page 251 is incorrect, and that he did not send a catalogue of the Birmingham Show to the party alluded to. He says, moreover, that he did not see a catalogue until after he had inspected the birds as a judge, and given his decision. This we are very glad to know; but we have the fact confirmed that catalogues were circulated before the day of exhibition, which is one of the chief errors which we would bring to the notice of all committees of poultry shows.

The following observations by Mr. Whiting, published in the last number of the Journal of the Horticultural Society, deserve especial and general attention. We are inclined to agree with Mr. Whiting in the opinion that our variable climate is the cause of the *Peach's* early decay on our walls, and we consider the gumming, and death of large branches to which the *Moor Park Apricot* is so subject, is a consequence of the same cause. This opinion is founded upon a statement made to us by the Rev. Mr. Beadon, President of the Hampshire Horticultural Society, that he knew cases in which the *Moor Park* had been for many years preserved from such injuries by binding hay-bands round the stem and branches, at the close of autumn, and continuing on those bandages during the winter. Mr. Whiting says:—

"It is clear to me that the variableness of the climate, coupled in some cases with a deficiency of attention, chiefly in spring, has more to do with the early decay of our wall peach-trees than either the unsuitableness of the plum-stock, or the present method of pruning the trees. In confirmation of this opinion, look into our peach-houses, where an old tree is not so great a rarity as it is against our walls, and yet in both cases the stocks and the pruning of the young trees are alike. Under glass, however, the tree enjoys a genial climate, and also the further advantage of better general management. There, want of space for the lateral extension of the branches is the greatest detriment the trees have to encounter; and if at the time of planting they were so arranged, that one tree might, if necessary, eventually occupy the whole area of the roof at eighteen inches or two feet distance from the glass, I see no reason why a peach-tree, even though pruned with a knife, and budded on a plum-stock, might not live and thrive for an indefinite number of years.

"As regards the apricot-tree, Mr. T. A. Knight entertained a notion that the short duration of the *Moorpark* trees arose in a great measure from its unnatural connection with the plum-stock; and many years ago he pointed out to me, in his own garden, the greater healthiness of a particular tree on an apricot-stock than that of another tree growing beside it which had been worked upon a plum-stock. As the apricot does not thrive in the light sandy soil of this garden, I determined upon trying Mr. Knight's plan, and with that view I sowed a few stones of several sorts of apricots. Four young plants thus obtained were planted against a wall, for the purpose of being budded with the *Moorpark*; finding, however, that they exhibited unequivocal symptoms of a delicate constitution, I did not bud them, but trained their branches to the wall till they produced fruit. One of these trees is a genuine *Moorpark*, and already some of its principal branches have perished by that peculiar disease which detracts so much from the value of the otherwise excellent variety; thus proving that misalliance is not the cause of the disease in question. Of the other trees, one is a Breda, one an orange, and the third an inferior variety of *Moorpark*; this last also shows symptoms of the same malady. This experiment seems also to show that some varieties of apricot can be reproduced from seed."

There is no reason assignable why the wines made at the Cape of Good Hope should not be equal, or even superior to those produced in any other part of the globe; and, indeed, from the evidence of palates from which there need be no appeal, we know that wines equal to the finest white wines of Spain have been there manufactured. We believe that the sole cause of the usual low quality of the Cape wines is carelessness in their manufacture. This opinion we find confirmed by the report of the Wine Committee of the Cape Town Agricultural Society. It is there stated that the samples presented last year are considerably superior to those previously produced. We are sorry to hear that the funds of that Society are so low, and if there are no errors in its management, we are quite sure that government assistance could not be better directed than towards its support.

The following is a list of the *Poultry Shows* of which we are at present aware. We shall be obliged by any of our readers sending us additions to the list; and giving the address of the Secretaries.

REMARKS, February 1st and 2nd. (Sec. J. Richardson, Esq.)

THE POSITION OF FRUIT TREES IN THE NEW YEAR.

THE past winter, if such it may be called, has been of such singular character, that I would advise all fruit growers to be on their guard.

Peaches, Nectarines, &c., here, are in such a forward state now (January 4th), that we have deemed it expedient to cover them instantly with the canvass so often alluded to. The buds are already in the condition of being rubbed off with the least friction, and cannot be expected to withstand some fifteen or twenty degrees of frost, which is something more than a mere possibility.

What, then, is to be done? My opinion is, that the only chance will be in pruning somewhat later, somewhat lighter, and in covering the trees during all sunshine, and all hard frosts, and uncovering to the chilling breeze and the cloudy day. As to late pruning, it may be called in as an accessory that may prove useful, and in this wise—early pruning, by confining the range of the sap in a narrower compass, by consequence increases its impetus, and has a tendency to force out the back buds somewhat earlier—a thing, under present circumstances, by no means desirable. In thus offering an opinion, I would not have it inferred that such falls in with the new idea of its being a prudent course to protect the wood of fruit trees from frost every winter. This new practice, so strongly urged by some, had originated, it would appear, with Mr. Barron, at Elvaston, a gentleman whose high name would certainly appear an authority for almost any gardening practice. However it may have succeeded with him, or others, I cannot say; I have so often known full crops of first-rate fruit after intensely hard winters, that it is not here where the shoe pinches. The public, after all, is a very changeable creature: Proteus-like, or as the chameleon, it is not always to be seen in the same form or colour. But these are days of experiment, and sooner or later, the cauldron being kept constantly boiling, the steam arises, and we come to the pure article. I allude here to the fitfulness which has

attended the progress of the question of protection, not governmental, but horticultural, and as concerns the fruitist. Mr. A. says, "Cover not at all. I lost all my peaches and apricots last year by this artificial procedure." Mr. B. says, "Depend upon it, it will not do to leave trees to accidental extremes, and dignify them with the high-sounding title, 'Nature.'" Mr. C. will not only cover to protect blossoms, but the very wood of the trees when in a state of dormancy; and Mr. D., who is a decided utilitarian, begs to know who is to find the protective material?

We had a saying in early days, that "it's all very well to talk of flying kites, but who is to find pack-thread?" And, indeed, so much of this covering is very expensive, especially if on for many months. As for straw, ropes, and all such things, they are quite unworthy the age; besides, these mightily concern the labour question, and it's certainly all very well for those gentlemen who are so fortunate as to get what amount of labour is really desirable; but what becomes of the rest? It is of no use saying, men can make them in bad weather; every gardener knows that in-doors work has increased, in a somewhat similar ratio to out-doors labour during the last twenty years; certainly, those practitioners who buy all their brooms, baskets, &c., instead of making them, as we countrymen are obliged to do, may spend much time in twisting straw ropes. I really, therefore, feel little desire to see the straw system become general, feeling assured that, when all things connected with them are duly estimated, there is no real gain—indeed, the very reverse.

But then, the question arises—If trees must be covered, what is best and most economical in the end? And really, if the public is prepared to build such expensive things as glass walls, surely it will not stumble at the question of a cheap canvass! I may here observe, that it is matter of great astonishment to me, and others, that a still better material has not been produced, seeing that our textile fabrics have, in general, attained so high a position. Canvass only needs an increased durability, and the world is not now confined to mere hemp for such purposes. There is no question but an ingenious man would speedily realise a fortune, could he produce an article combining the desiderata of the horticulturist.

Thus much for a hint as to progress. Let us get back to the fruit-tree protection, as to our present position. Canvass, then, at fourpence per square yard—for which price, I have little doubt, it could be had for in quantity—is at present the most eligible; and this, fitted to a given length of walling, and confined to that purpose, will last for seven years. But then, it ought to be fitted up by a mechanic in the first instance, or, ten to one it is worn out in half the time by imperfect action.

Now, as nobody, in these days, of any repute, will doubt the immense utility of copings—moveable copings, why not have these wide enough to receive canvass on a roller, somewhat after the manner of the Metropolitan orchid houses? By such means, the canvass might be kept generally dry, and consequently wear the longer. I merely throw out this as a hint for those it may concern; those determined to go a-head, and who are not to be baffled into unworthy practices by an unjustifiable fear at the first outlay, which fear, by the by, has ruined many a well-concerted plan.

However, whatever plan, get, we say, the trees covered immediately, but not with the intention of coddling them; but remember, that if the trees have been neglected in the previous summer, if their wood is badly ripened, do not blame protection: no covering can render such a condition satisfactory. As before observed, it is in the use of protection I confide; it is quite possible to prove an abuse.

Let the trees be unshaded on all possible occasions,

remembering that with dark coverings, and the bud in an expansive state, what is termed "drawing," by practical men, will take place; and the best way to put this practical technicality into plain English, is to call it "weakening"—weakening the functions of those parts in course of expansion and development, on which not only the fruiting tendencies depend, but, the very energies of the unfolding wood-buds from which future crops should be raised.

As an ordinary maxim, I may add, withdraw your canvass at least every second day, unless some serious reverse of weather take place. But our readers will very naturally desire to know what is meant by reverse; what the trees will endure, and what they ought not to be compelled to endure. First then, our wall trees, in general, will endure unharmed, under ordinary circumstances, some ten to fifteen degrees of frost, until their buds are actually swelling. I do not, of course, speak this irrespective of condition in the tree, for it may have been a late wet and glutting autumn, the trees rather gross, and all their vessels clogged with watery matter. It need scarcely be observed here, that the more succulent the habit, the greater the chances of a rupture of the vessels and delicate structure of the wood. These remarks are intended to apply to ordinary winters, and trees under ordinary circumstances.

To proceed, the trees, up to the time of the real opening of the bud, or when the very first symptoms of the interior and more delicate parts appear, will endure any amount of what are termed cold winds, providing the thermometer does not indicate above three or four degrees of frost. Indeed, I prefer these refrigerators, welcoming them in the character of retarders; but if wet comes on, the case becomes slightly altered; a modification of practice is then requisite. If, unluckily, your man is caught napping, and has left the canvass off under the pressing and doubtful circumstances here alluded to, and you discover early the next morning that your unfolding buds are sealed up with an icy covering, my advice is, take care that the sun does not shine on them; canvass them over directly, and if your wood has been ripened well, fear not.

To meet all difficult cases, such as appear in the inquiries of anxious fruitists, young in experience, but old in emulation, would be to write a big book, which few would have patience enough to carry a mile on their shoulders; and shall I say, fewer still have time or patience to read. "Touch and go," is the motto in these days; and all I can add is, let all interested study a little those principles to which the mind is here directed.

R. FRINGTON.

BULBS.

(Continued from page 303.)

CALOSTEMMA.—This is a genus of very pretty Australian bulbs, belonging to the Pancratioid section of Amaryllids, and requiring about equal quantities of peat and yellow loam, with a little sand, to grow them in pots; but they will grow and flower out in a warm border during the summer, and increase themselves by offset bulbs. The flowers are not individually large, but the colours are gay, and there are many flowers in each head or umbel. The cup, to which the stamens are joined, is nearly up to the middle of the flower, and the edge of it is fringed round with triangular teeth; it is from this frill it has been called the Gay Crown; or Calostemma. The stamens rise only a little way above the edges of the frilled crown, and they carry small erect anthers; these, with a deep painted style in the middle, add much to the significance of the name.

CALOSTEMMA PURPUREUM.—This is a rich purple flower, and when the bulb is strong, and in good con-

dition, there will be from fifteen to twenty flowers in one head (umbel), and each flower has a short footstalk (peduncle). The flower scape, or the stem which carries the head, is about a foot long; and the leaves a little longer. There is a midrib to every division of the flower in this genus, which is continued down to the seed-pod; and in this species the fil- is as purple as the rest of the flower.

CALOSTEMMA LUTEUM.—A very pretty thing, but very scarce. Yellow flowers, with green midribs; and a rich purple at the bottom of each division of the flower, about the same size as the last; but this and the next require more sand in the compost than *purpureum* if they are grown in pots.

CALOSTEMMA ALBUM.—A much scarcer bulb even than the last, from which it differs only in the colour of the flower, unless, perhaps, that the fringe on the cup has the teeth a little sharper and smaller.

CALOSTEMMA CARNEUM (Flesh-coloured).—This is another very pretty plant, and is more hardy than the others. The flowers are bright pink, and about the same size as those of the others. From all appearance, and from our knowledge of kindred plants, there is every probability that the whole four will cross with each other; and if they do, they promise as much diversity as the *Gladstons*. Sir Thomas Mitchell found this species on the summit of a chain of rocky mountains; he sent it to the Horticultural Society, in whose garden it flowered here, for the first time, about a dozen years back. There is another species called *Cunninghamii*, but I know nothing of it.

CARPODETES.—The accent is on the o. There is only one bulb in this genus known to us—a native of Peru, near Obragillo, in the province of Canta, where the natives call it Chihuanhuata. It is figured in the "Flora Peruviana," where it is called *Pancratium recurvatum*. In those days every flower of this form was called a Pancratium, just as we might say to-day that a Tulip, a Hyacinth, or a Fritillaria, is a Lily. This bulb is middle-sized, oblong, and with a long neck, purplish, with black spots. The leaves are an inch wide, and ten inches long, and blunt at the point; the flower scape is stout, shorter than the leaves; the flowers are between purple and yellow, and the seed-pod is narrowest in the middle—a very unusual shape, so that the whole plant is easily known. Pure yellow loam, with a little sand, suits it best. It is a summer-growing bulb, which increases slowly by offsets, and is more safe in a pit.

CARPOLYZA SPIRALIS.—This is one of the smallest bulbs which belongs to the order of Amaryllids, and one that has puzzled more learned heads than any of them. Jacquin called it *Orinum tenellum*, but it bears the same relation to *Orinum amabile*, as the *Agropyron* does to the Talavera wheat. In the "Botanical Repository" it is called *Orinum spirale*. Le Heritier makes it *Amaryllis spiralis*, and the younger Linneus calls it *Hemanthus spiralis*, in the "Hortus Kewensis." As late as 1834, it was named *Strumaria spiralis*, in the "Botanical Magazine." Dr. Herbert, commenting on all this confusion, very justly remarks, "when each successive writer refers a plant to a different genus as in this case, it may with great probability be surmised that it belongs to none of them;" and so it turns out with this one. *Carpolyza*, which is now adopted by common consent, was the name given by the late Mr. Salisbury, in his "Paradisus Londinensis." The flowers of this little bulb are very pretty, star-shaped, bluish-white inside, and pinkish outside, quite pink in the tint; the scape carries two or three of them, and they are about the same size as those of *Aspermatheca orientis*; the leaves are not much stouter than those of a young onion three weeks old, and much in the same way, curiously twisted; the bottom of the scape has also three or four turns of twists, for which it is called *spirale*. It is a native of the Cape

of Good Hope, growing near Cape Town. With the exception of *Griffithia hyacinthina*, it is the only bulb in the order that will grow better in peat than in loam. It flowers in the autumn, before the leaf, like a true Amaryllis, and grows through the winter like an *Lia*, requiring the same kind of treatment in all respects.

CHLIDANTHUS FRAGILIS.—This is a yellow-flowering sweet-scented bulb, which is as much prized in the gardens in Buenos Ayres, Chili, and Peru, as any of the Narcissus tribe is with us. In its outward aspect it is not much unlike some kind of yellow Narcissus, but it belongs to the Pancratioid section of the order, although hardly any traces of the cup is seen. If there was a good demand for this bulb, they might increase it almost as fast as the potato; it is so notorious for making offsets, so much so, indeed, that they hinder the old bulb from flowering. It is a summer-growing bulb, and flowers freely with us in the open air; it will not stand out our winters, however, as the wet border splits the old bulb. It should be taken up in the autumn and dried. The very same treatment we give to *Gladiolus pectinatus* is best for it. It is not the *Pancratium luteum* of the "Flora Peruviana," as has been asserted. (See *Chilanthus*).

CHORETIS.—We know only two species of this genus, and two beautiful things they are, certainly; but how the learned demonstrator of the order, Dr. Herbert, could see any difference in them from *Hymenocallis*, passes my comprehension. The anther turns up a little at both ends, just like a school-boy's "pot-hook," and is attached to the filament a little nearer the upper end than is usual in *Hymenocallis*, and there is a little difference in the shape of the seed, that is all. However, I must keep to my text; I have no desire to change a name, but I must be allowed to make some few remarks from the evidence of my senses, and I shall show my ideas on *Hymenocallis* when I come to it.

Choretis inhabits the north-eastern parts of Mexico, and onwards through Texas, where Drumhead met with them growing in good loamy soil; but in pots they delight in a rather sandy soil, and abundance of water; and I have not the least doubt that, if we had a good stock of them, instead of being very scarce, we might turn them out in May into the margins of the ponds and ditches, where they would grow and flower as freely as rushes.

CHORETIS GLAUCA has the leaves upright, sea-green, nearly three inches wide, and twenty inches long; the flower-scape is stout, and above a foot long, carrying three or four flowers on the top; the flowers are sessile; that is, without a footstalk. Every Amaryllid that is sessile, like this, must have the seed-pod resting on the top of the scape; from the seed-pod of this *Choretis* rises a green tube, full six inches long, longer than the tube of the Night-blowing Cereus (Cactus), then a wide open flower nearly four inches across, as white as a lily, with a tinge of green on the back of the midribs, and a large green eye. The cup inside is also very large, white, and jagged on the edge between the stamens. Altogether, it is a very beautiful flower. The bulbs may be kept dry six months, from the end of August to March.

CHORETIS GALVESTONENSIS (Galveston Bay, Texas).—Another fine plant, in all respects like the last, only with all the parts much smaller, and with deep green instead of glaucous leaves; also four flowers always on a scape.

CHLIDANTHUS LUTEUS.—This is the *Pancratium luteum* of Ruiz. It has much the aspect of a small Narcissus, with yellow flowers, and always two of them on a scape; the flowers are stalked (pedunculate), the stalk above an inch long; then a round seed-pod, and a yellow flower with a longish, small tube, evidently very near *Chlidanthus*, and if the two would breed together, the

offspring would be more entitled to be called, Peruvian Daffodile than *Isomus*. Before 1840, this genus was spelled *Olinanthus*, but that is now discarded, as giving a wrong meaning. There are two more species, *humilis* and *Macleana*, but I know nothing about them.

CLIVIA NOBILIS.—A well-known plant from the Cape, with the looks of a young *Agapanthus*, but with stiffer leaves, and with turned-down flowers from the top of the scape (Cyrtanthiform). This is of the very simplest culture, if you keep it from heat, and do not force it into any hurry. It will grow in any light earth in a pot. You might try all the mucks, from the Lobos Islands to the Isle of Dogs, on it, without any perceptible effect. It will grow well in moss without any earth; and it will grow in any light or heavy compost, if it is kept rather dry in winter. Whenever it gets sulky, and refuses to grow, you must shake all the soil from it, and begin afresh: there is no doctoring of it. If you keep the frost from it, in an outside border, it will flower and ripen seeds freely enough. I had it so, and it took more than a year to ripen its scarlet berries, which look exactly like the ripe seeds of *Asparagus*. Seedlings of it would tire one's patience with their slow growth; and if you try to force them, they are as likely to stand still as not. Dr. Herbert said, "I believe it to be as possible for a *Clivia* to breed with a *Cyrtanthus*, as with an Oak-tree;" but I differ from him, and from all who separate it from the vicinity of the *Cyrtanthi*.

COBBOURGHIA.—This is "a happy family" of bulbs, they so agree with each other in their odd ways. If you ask a gardener what sort of things they are, he will say, "Peruvian bulbs, very beautiful, ma'am; very easy to grow; too easily increased—the worse luck; not very fond of water, or particular about soil; not over partial to a bright sun, it is true; but there is so much bother with them, as they go to rest all the winter; and you can begin them in the spring any time it is convenient; and then, you see, if one is pinched for room, as we generally are in the spring of the year, we can plant them out on a warm border, and they will grow all the same." "Yes, yes; but now I do not know what kind of flowers they produce." "Nor I, ma'am; for I never could get them to blow." There is not a gardener in the kingdom who has flowered the same bulb of any of the species of *Cobourghia* three years in succession, and yet they never refuse to flower the first or second year after they come over. In Mexico, and other Mexican cities and towns, they grow one of the species in pots, as we do Hyacinths, time out of mind, and in such numbers that an erroneous idea has got into our books that it is a native of Mexico; but I have never heard of any of them being met with there in a wild state; and J. Maclean, Esq., a British merchant at Lima, dug up the one they cultivate in Mexico on the hills facing that part of the Peruvian coast; and he found some of them growing in scanty soil, on the edges of rocky precipices, where great heat and terrible gusts of wind must often affect them. The way I recommend their cultivation is founded on the following experiment on a variety of bulbs of this nature. On a slate stage, along the front of a greenhouse, which was freely ventilated day and night all the summer, I placed an inch or so of sandy soil the whole length, with another inch of clean white sand on the top; I had two objects in view with this bed, which was about twenty inches wide, and twenty-four feet long, to keep a warm bottom for pots, and to place a lot of obstinate bulbs between the pots, among which was one of *Cobourghia inornata*. The bottom of the bulbs were on the bare slate, and a little extra soil placed round them to keep them firm. The drainage from the pots kept the soil constantly wet, and sometimes, in very hot weather, a quantity of water was poured in between the pots. The roots travelled rapidly along the slate, the leaves went off equally

strong, and soon had to be supported. In September the *incarnata* threw up a strong flower scape very nearly two feet high, and carried five splendid flowers. *Leucoerythra latoides*, another very obstinate bulb, flowered on this stage, with several others that are now better understood. It is very easy to imitate this in a division of a cold frame, or out under a south wall, by placing very soft bricks under a thin bed of very rich loam, and according to the constant moisture. The soft bricks would be much better than the slate, and the roots would cling to them like ivy to a wall. The heat would be scorching in the height of summer, but that is just what a vast number of bulbs from South America and Southern Africa seem to require in our climate, which is quite warm enough for their leaves and flowers. I know at least fifty as fine bulbs as one need want to grow, that would answer on this plan better than on any other that I could devise.

COBOURGHIA COCCINEA.—This beautiful bulb was first discovered by Matthews, who sent dried specimens of it to this country. Mr. Maclean was the next who found it, "in one of his excursions on the Cordilleras." He sent two bulbs of it to Dr. Herbert, and they soon flowered with him in pots, and in strong loam and rotten dung; the pots stood out-of-doors all the summer of 1830, which was cold and wet, were kept dry all the winter, and early in the spring, before the leaf, both of them flowered. In 1810 they went through the same treatment, and one of them flowered the same autumn, after the fall of the leaf. The flowers are like those of *incarnata*, but shorter, and a better scarlet. All the species have dark green tips to the lobes.

COBOURGHIA FULVA (Fawny).—Matthews sent dried specimens of this, also from Lima, and J. Wilmore, Esq., of Oldford, near Birmingham, was the first to flower it. The tube of the flower is full three inches long; the colour, a dull yellow mixed with grey and brown, with the usual green tips.

COBOURGHIA INCARNATA.—This is the species on which the genus was founded by Mr. Sweet. It was figured, before him, by Kunth, and called *Panocratum*. It is a native of Quito, growing on the banks of the river Machangara. The leaves are milky-green, the tube of the flower five inches long, the colour deeper than the word *carnea* would imply, more crimson, and the lobes blotched with green; it is a fine thing.

COBOURGHIA TRICOLORA (Three-coloured).—This was a puzzler for many years; no one knew where it was a native of; but it was extensively cultivated in pots in the city of Mexico, as we do Hyacinths, time out of mind. From this it is called "the Mexican species," in books; but it is a true Peruvian, and as bad to get to flower here as any bulb we know. Mr. McLean had it dug up on the Andes. The flowers are not so long as the above; the colour is light scarlet, the lobes edged with a paler colour, and a streak of green runs down the centre of each lobe, instead of the usual green blotch.

COBOURGHIA STYLOSA.—*Osus*, or *osa*, in our language, means a greater degree, or excess. Style is the female organ, and *stylosa* means it to be longer than is usual in this genus. Without the flowers this looks very much like *incarnata*. It is also from near Quito, where M. Harting found it, who sent it to the Horticultural Society. The flowers are as long, and larger in the opening than those of *incarnata*; but the colour is very different—indeed, peculiar—a dark greyish-green, to the tube, extending along the midrib of each lobe, which are otherwise rich orange-red; or, in other words, the colours in this species are reversed from the usual run in the genus.

COBOURGHIA VARIATA.—This is a handsome flower, and a great favourite with them in the gardens about Lima; but where it is growing wild I never heard. It is the only one of them which was met with by the

authors of the "Flora Peruviana," who called it *Panocratum*, of course. All those flowers with a cup inside, to which the stamens adhere, were supposed to be *Panocratum* in those days.

In addition to the brick-floor, I would advise the offset bulbs to be destroyed by twisting a sharp-pointed stick through the middle of them, or by pulling them off as soon as they can be laid hold of. They certainly hinder the flowering of the bulbs. D. BEATON.

(To be continued.)

PROPAGATING TENDER AND HALF-HARDY PLANTS.

THIS chapter, without embracing all points of an interesting subject, and which, before long, will be engaging great attention, is written solely to meet the inquiries made, and the explanations that have lately been deemed necessary. The following questions will not only embrace the wants of correspondents, but I hope may be interesting to new beginners in general.—

1st. "Is air to be admitted to fresh-made and newly-planted cuttings placed in cold frames?" We frequently receive many questions, evidently from intelligent people, well versant with the principles of some of the exact sciences. They are accustomed to see some one primary principle regulating the whole routine of practical detail, and becoming somewhat enthusiastic in gardening, they very judiciously wish so far to see their way, as to be able to refer to a definite principle as the basis on which their operations are to be founded. These are the people that, if they persevere, will ultimately make the most successful gardeners. But, trusting too much to any one general principle, such people are too apt to "give up" from a disappointment, just because, though a principle be sound, the modes of its application may be, and must be, as varied as the nature, the habits, and the circumstances of the plants to which they are applied. Hence, as a general principle, it may be stated, that for growing cuttings with their foliage on, or even partly reduced, a minimum of air, and either shaded or diffused light, are necessary, just because a current of air and exposure to light would rob the cutting of its juices; of the saving of which the future processes of rooting and growing depend. On one hand, therefore, the more successful you are in keeping your cuttings from flagging, by checking the air and light, the sooner will roots be formed; but, on the other hand, you may keep so close in a moist atmosphere, may shade so well from the sun, or place the cuttings at such a distance from the glass, that the material of your cuttings will be exhausted in upward growth, and thus you may either get no roots at all, or, very likely, be rewarded with a sickly, drawn, leggy young plant. While closeness and diffused light are thus generally indispensable at first, it is no less necessary to give the cuttings air and light as soon as they can bear it. No royal rule can here be given; every case must be regulated according to its peculiar circumstances. For instance, here are succulents, such as *Cereus*, *Mesembryanthemum*, *Crassula*, &c.; who would think of keeping them shut out from air by placing a bell-glass over them? Roots, in their case, will generally be formed long before air and sun combined have taken away, by evaporation, the stored-up juices. There are *Ceratanium* and *Pelargonium*, which will strike as well in the open air in July as they would do with all the paraphernalia of lights and shading. But try a *Heath*, or an *Epacris*, or a *Chorogone*, by such means, and you may wait, and cry until you were hoarse for a plant to come. Then, the same plants, as respects the cuttings from them, require different treatment at different times. The ripening

shoot in the autumn will stand more air, and rougher treatment, than the soft, spongy, watery shoot, in the spring. In the one case, growth is being *arrested*, in the other, it is being *excited*. Again, in the first case, and at once, such stimulus as a warm, close, shaded atmosphere, and in many cases you will get shranked cuttings and rotten tissues for your reward. Apply such excitements when growth is progressing, in spring, and with the extra care for securing a close atmosphere and a diffused light, you will be paid in obtaining plants in a seventh part of the time you would do in the autumn. Two general rules may, therefore, be deduced from a primary principle. First, (Do not hurry cuttings inserted in autumn; let them have time, and as much air and light as they will stand without flagging. Second. Never allow cuttings inserted in spring, or early summer, to receive a check if you can prevent it. In their case, little or no air should be given during the day, until roots are produced, and then it must be given at first in small quantities. Cuttings, as well as plants, must have their atmosphere changed at times. For preserving healthy robustness, and warding off insidious damps, I have long practised, and recommended, giving cuttings a little air at night, less or more, according to circumstances.

2nd. "What is the use of bell-glasses? Is it to keep out the air? Would not a common frame answer the same purpose?" A certain work says, after once placing them on the cuttings, "*wipe them out every morning*" Is not this to remove damp; and would not wiping off the condensed moisture, on the inside of a cold frame, so as to prevent the moisture falling, answer a similar purpose? Or, might not air be admitted for a quarter of an hour to dry it up? and, if so, what need of these expensive bell-glasses, especially when we have little enough to spend on such matters? Now, some of those very matters puzzled my own brain more than twenty years ago, when there was no COTTAGE GARDENER to resolve a doubt, but when we were left to arrive at principles and theories through the stern teachings of facts. Our correspondent, with commendable zeal, tells us, that he "likes to understand, and go through with everything he undertakes." There is no want in his inquiries, and that of others that have reached me, on the same subject, but that of *definiteness*. The question of cuttings is too general. Different plants require different treatment. Then to one but the plants our friend has in his eye require no such things as bell-glasses. But that is no conclusive argument against their use. I thought myself wondrously clever when I got cuttings to root in plenty, in my father's window, by adopting the simple plan of setting the pots on the floor during sunshine; and I deemed myself of still more importance when, in the shady borders of green-houses and forcing-houses, I got plants to root as if it were at my bidding. I did not find myself to be a perfect novice until I tried hard-wooded and difficult plants; and then, so crestfallen was I, that even such a simple thing as a hand-light, full of rooted pink pipings, gave me something like relief, because, then the first dim perceptions of the principles of propagating by cuttings passed through my mind.

However we gentlemen's gardeners may either blunder, or stick to old customs just because they are "ancient ways," we may rest assured, that there is reason for the processes employed, so long as shrewd tradesmen, that must meet the competition of the market, adopt them. About twenty years ago, I noticed the finest sight of struck and striking hard-wooded cuttings I ever beheld; and as not very long since I saw a similar plan successfully adopted, it may be profitable to detail it here. The house was a wide lean-to, with a pit in the middle and shelves all round. The pit was filled with tan and sand, so as to give out a

steady mild heat of about 70°. The plants, Heaths, Epacris, &c., had been slightly excited before the short cuttings were taken off; the pots had been more than three parts filled with drainage, then a little sandy-peat, covered with an inch of silver-sand, and well watered. When dry and firm, the cuttings were inserted and watered, when the tops were dry the pots were plunged for three parts of their depth in the pit, each covered firmly with a bell-glass, and then the sashes of the pit put on. You will observe, that here there were three thicknesses of glass: the roof of the house, the sash of the pit, and the bell-glass; and, notwithstanding the diffusion of light from passing these mediums, a slight shading was wanted in bright days. The following were the circumstances in which I found them. Some lights were close shut, and the bell-glasses beneath them close over the plants; beneath, other lights also close, many of the bell-glasses were raised a little on one side, because rooting was progressing; in others, farther advanced, the glasses were removed, but the sashes were close; while in others, the bell-glasses were not only removed, but there was an inch of air at the top of the light. In looking round me, I saw others standing with a great deal of air under hand-lights; and others, on open shelves, hardening off for potting. Now, I by no means say that such things could not be struck without all this attention and bell-glass-management; but I question if many other modes would be more certain, expeditious, and economical. With these general remarks, I proceed to make a few running notes on our correspondent's inquiries and deductions.

1. "*The great expense of bell-glasses to amateurs.*" I think they are the cheapest agents he can employ. A dozen of them, from four to six inches in diameter, may be got for about a crown, provided there is only one or two of the last size. Now, without saying anything of the expense of a frame, it is not likely it will be always devoted to propagating purposes, it most likely will have another crop during the season, but it is very probable, that now and then some cuttings of desirable things may come in his way; and then, if what we have said of air, &c., be true, the cuttings could not receive justice in the frame, and the max. crop in it too. Now, in such a case, a bell glass comes to our aid; for, if we even put the cuttings in the frame, by means of the bell-glass we can give the cuttings any degree of shade, of closeness or openness we require. Half-a-dozen, even, of such utensils would open up a large field for experiment. A good substitute would be to insert the cuttings in a small pot, and then set it inside a larger one, so that the tops of the cuttings are below its rim, and over that to place a square of glass that would cover the mouth of the pot. Turning the glass every day would prevent damping from condensed moisture dropping.

2. "*The use of the bell-glass.*" This is not merely to keep the cuttings from the exhausting effects of a free current of air, but also to prevent the evaporation of their juices, by surrounding them with an atmosphere more or less saturated with moisture. Every leaf and green part of a cutting, previous to its being taken from its parent plant, performed perspiring, elaborating, and assimilating agencies. These were sustained by the reciprocal action going on between branches and roots. The first thing we do is to destroy that connection when we remove the cutting. Our next object should be to preserve the cutting as it is; to place it in circumstances in which it shall not be allowed to perspire more than it can absorb. Assimilation must, therefore, take place slowly, and thus we give light and air in proportion as the cuttings are forming a callus, or roots. Now, with bell-glasses, we could give every pot in a propagating frame its distinctive necessary treatment, which we cannot do without, because, in difficult cases, when I

either shade or give air to suit certain cuttings, we run the risk of injuring others.

8. "*Wiping bell-glasses every morning, or wiping the inside of a cold-frame to prevent the dropping of condensed moisture.*" Now here, in the first place, in all tender and difficult cases, the exposure necessary on wiping a frame would be injurious. Besides, unless in cold nights, in autumn and spring, there would be little condensed moisture, which will always be in proportion to the moisture within, and the difference between the internal and external atmosphere. In all common soft-wooded plants, the leaving a little air on at night, or for a short time in the morning, will be sufficient. The wiping of bell-glasses did use to be a serious affair; but I have repeatedly shown how that trouble may be next to altogether abolished, by using *conical*, instead of *flat-headed*, glasses. In the latter case, the drops would fall on the cuttings; in the former, it would trickle down into the soil. By using double pots, placing the cuttings in the inner one, and the glass between the inner and outer, I have frequently struck tender things, that after being first watered, never had the glass moved until it was seen the cuttings were fairly growing, and that, too, when from first to last they had enjoyed a fair amount of sunshine. Not now to speak of the slow decomposition going on in such circumstances, it will at once be evident that the moisture raised by heat during the day, placed the cuttings in an atmosphere in which they were forced to absorb, as well as perspire. The cold of night condensed that moisture, and returned it to the soil, just ready to be brought up again the following day by a something like perpetual-motion process.

3rd. "*Allowing that bell-glasses are not essential for tender and hard-wooded plants, and a useful auxiliary for solitary instances of experiments and propagation; may they not be done without in the case of soft-wooded Greenhouse Plants, and those now generally employed for summer decoration, for baskets, and flower gardens?*" Yes, especially if propagation is confined to two periods—early in autumn, or in spring. In the first case, they should be kept cool. In the second case, they will rejoice in the excitement of a slight hotbed. In the one case, a result is obtained with a minimum of care, at the expense of a maximum of time. In the other, time is gained, but care and attention are increased. In both cases, I prefer diffused to shaded light. If placed two or three feet from the glass, little or no shading will be necessary; but these matters have already occupied attention.

4th. "*How many leaves should be left on cuttings?*" This must depend upon whether they are large or small, and the lessor or greater means at your disposal for preventing them exhausting the cutting by evaporation. I have had cuttings root quicker with all their leaves on than those partly mutilated; but then they were placed in circumstances that nurtured and stimulated the vital energies. A medium path is generally the safest. When the leaves are large, it is best to reduce them, and thus lessen the perspiring, evaporating surface; but no general rule can be given. In autumn it is advisable to cut to a joint, removing the leaves there, and either taking away or shortening a few above; but in spring, with the assistance of a slight hotbed, there are many things, such as *Verbenas* and *Calceolarias*, that we should consider it a waste of time to cut to a joint or leave a leaf; but the vital forces are in a different condition then from what they are in autumn.

5th. "*What temperature should be given cuttings?*" In autumn it should little exceed that in which the plant stood. In spring it will always be advisable to raise it a few degrees. This holds equally true of tender and stove plants. Hence the ease with which such strike generally in a hotbed, under a bell-glass. Where autumn-planted cuttings are long in rooting, they may

receive a stimulus by heat at their base when they have swelled or callused there.

6th. "*How should I water cuttings?*" This is a matter of great importance. Let the utensils and materials be well soaked and drained before the cuttings are inserted, and water so as to make firm and fill every cranny on the surface. After that, I prefer *dew*ing the cuttings instead of soaking the soil. This is particularly necessary in autumn-struck cuttings, if you would save them from damping in winter. Such plants, even when rooted, and you give them a little air you can in dull foggy weather, will flag when a bright sunny day comes, even when they are moist enough. At the roots, just because both leaves and roots have been enervated by the want of sunlight. In such cases, soaking away at the roots will only be the precursor of future cares, if not total disappointment. A slight *dew*ing of the foliage, taking away the air, and, in extreme cases, a slight shading, are the proper remedies until the plants get used to the change.

Here I must stop, and my apology for the length of the article must be the fact, that the matters alluded to will, ere long, be engaging the practical attention of our readers.

B. FISH.

THE AURICULA.

(Continued from page 309.)

Winter Treatment.—Of all the seasons in the year, this is the most difficult to carry the Auricula safely through to the desired haven of spring. The difficulty consists in, or arises from, the nature of our variable climate. In its native Alps the air is keen and pure, and the perpetual covering of snow keeps them from growing, and at the same time shelters them from extreme frost and the cutting winds; so that when the warm sun of April melts the snow, and warms the air, they spring into life and bloom almost like magic. Just in proportion as we imitate this state of natural management or treatment will be our success; for although our Auriculas are, as my good friend Mr. Beaton would say, high bred, yet, constitutionally, they have the same character in regard to requiring a winter treatment, similar to their, perhaps, more hardy ancestors.

The season for this winter treatment commences towards the end of October. They should then be placed with a full exposure to the sun. The best habitation for them is a cold brick-pit, placed upon an elevated stage of boards, with a flagged floor for it to stand upon, the floor sloping slightly to the front, and a convenience of giving air by means of, sliding shutters in the wall, back and front, but as this is a rather expensive winter-dwelling, they may be kept very well in a common garden-frame, of a size proportionate to the collection. In this frame I should prefer boards to set the pots upon, resting upon bricks, so that the air can pass round, upon, and under the pots, as well as among the plants. A free circulation of air is very important at this dull, moist season of the year. Should none of these articles be conveniently had, they will do moderately well upon a bed of dry coal-ashes, so elevated as to bring the plants within six inches of the glass.

Having them safely in their winter quarters, the attention they require then is to give them plenty of air on all favourable occasions, and to shelter them from severe frost by securely covering them up while it lasts. Should the frost reach them, great care must be taken in thawing them. The sun should never shine upon them whilst frozen. Keep a mat thrown over the glass till the frost is slowly overcome, and then they may be exposed fully to it by drawing off the lights. Very little water will be required during winter, the less the better, providing the plants do not actually flag for the want of it.

By these attentions daily attended to, the plants will, towards the end of February, be beginning to grow, and will then require a close looking after. Every decayed or decaying leaf should be carefully removed without injuring the healthy ones or the stems, and diligent search made for the slugs and snails, and every one destroyed. Should worms be in the pots, they will show they are there by their casts on the surface of the earth. Generally, they may be got rid of by turning the ball of earth carefully out of the pot, and picking out the worms, which may be seen winding round the outside of the ball. Should they be inside, then, when the plant requires water, give it water impregnated with lime, this will effectually kill the worms. Water will, in February and March, be required more frequently and more liberally, to encourage the flower-stems and buds to appear strong and healthy; and thus I have been round the year, and then commences the top-dressing and attentions of the spring season.

Propagation: By Offsets.—I have already incidentally mentioned these, when describing the operation of potting, but I must enlarge a little here. No offset should be taken off until it has roots of its own. If very small, three or four offsets may be put round a pot close to the side; there to grow until they are strong enough to be put singly into small pots, but if moderately strong, they may be put into pots singly, in proportion to their size. In general, small 60's will be large enough, which are about three inches diameter. In these they remain for twelve months, and are then to be potted into the same size as the established plants. Blooming plants are usually grown in small 32's, which are 5½ inches across, inside measure. In these put the strongest year-old offsets, and they will bloom the next season.

By Seed.—This, to increase the chances of improved varieties, should be saved only from flowers of first-rate properties; and further, to increase with a certainty of success, such as are intended for seed should, when in bloom, be placed under a hand-light, far away from their inferiors. The seed-vessels are, in wet weather, very apt to turn mouldy and decay, and consequently destroy the seed also. The hand-light will prevent this also. Gather the seed as soon as it is ripe, and keep it in a dry room, hung up in a paper bag till the season arrives for sowing it. If you have the convenience of a greenhouse, February will be the best time, but if not, sow a month later in a cold frame; sow the seed in shallow pans, well drained, in light compost; press the compost evenly down, and then give a gentle watering; sow the seed upon it while moist, and then cover it about the eighth-of-an-inch, and cover the pan with a flat piece of glass. It will not require watering, because the moisture in the earth below will rise up and moisten the covering. Place the pan as near the glass as convenient, and watch the soil that it keeps moist. The seedlings will come up in about a month's time, and then remove the glass, or the plants will draw up weak. As soon as they can be handled with a pair of small sticks, transplant the seedlings into similar pans, similarly treated with respect to water, but without the glass covering; replace them on the shelf near the glass, and when the sun shines, shade them. It may be necessary to transplant them once more into fresh soil and fresh pans previously to potting them off into small 60's, and, indeed, is desirable to do so, if convenient, as it strengthens them greatly, and forwards their growth.

Pot them off into pots as soon as they have made four or five leaves, and place them under a cold frame, shaded daily until fresh roots are formed; then subject them to the summer treatment, and pot the strongest into blooming-pots in September. These will bloom the following season.

T. APPELEY.

(To be continued.)

CONIFERÆ.

(Continued from page 286.)

PINUS.—This genus contains the greatest number of species of the whole tribe of Coniferæ. It is distributed through almost every clime of the world. The common Scotch Fir (*Pinus sylvestris*) is found growing to almost the utmost limit of vegetation on the cold mountains of Norway and Sweden, whilst other species inhabit the mountains of Mexico, in the warmest latitudes. This universal distribution of these trees, sheltering man and beast both from cold and heat, is another great proof of the benevolence of the Creator of all things towards His creatures, enabling them to bear and exist in climates that would otherwise be uninhabitable. From the various species of this large division of Coniferæ, mankind extract, besides timber, various substances of great use in the arts and manufactures of every-day life. Oil of turpentine, common and Burgundy pitch, Hungarian balsam, Bourdeaux turpentine, are obtained from this genus and administer to the wants of man; and then he makes use of the wood for building his dwellings and for fuel, for which latter purpose it is admirably fitted, on account of the abundance of oily matters it contains.

The trees belonging to the genus are found in various altitudes, some growing on lofty elevations, whilst others inhabit valleys almost down to the sea-shore. The genus is distinguished by the great length of the leaves, which grow in sheaths or bundles; by the cones, which are oval, and have their carpels, or scales, thickened at the top, so as to hide the bracts; and their carpels are persistent, remaining attached to the axil of the cone for years after the seeds have been shed. The cones, too, in contradistinction to the cones of the Spruce tribe, are generally erect, that is, the small end points upwards. By these marks the Pines may be easily distinguished from other genera.

It is somewhat remarkable that there are, in this genus, a certain number of species that have two leaves only in each sheath, others three, and others five in each bundle. And as this is not a chance affair, but is regular and constant, I shall arrange the species in my enumeration of them in three divisions:—1st. Such as have two leaves in a sheath. 2nd. Three. And 3rd. Such as have five leaves in a bundle or sheath.

DIVISION 1ST.—LEAVES GENERALLY TWO IN A SHEATH.

PINUS AUSTRIACA (Austrian Pine).—A very hardy, robust-growing tree. It has been found to bear the sea breeze better than almost any other evergreen tree; hence it is important to the owners of land so situated.

PINUS BANKSIANA (Sir Joseph Banks's Pine).—A native of the cold regions of Hudson's Bay; a low-growing tree of considerable beauty. The natives of these inhospitable regions cover their huts with its branches, which, when covered with snow, look like so many enormous snowballs, and are, when heated with its logs of timber, warm and comfortable. It was named by Mr. Lambert in honour of that scientific and enterprising botanist, Sir Joseph Banks.

PINUS BRUTIA (Calabrian Pine).—Native of the Calabrian mountains. It has a synonyme, *P. conglomerata*, from the clusters of remarkably handsome long cones it produces. Perfectly hardy, and produces excellent timber.

PINUS FISCHERI (Dr. Fischer's Pine).—So named by Mr. Booth, of Edinburgh, a celebrated nurseryman there. Very little is known of this species.

PINUS FREMONTIANA (Captain Fremont's Pine).—Named in honour of that hardy, enterprising, and persevering explorer of the regions of which it is a native, namely, the mountains of Sierra Nevada, in California. It is a very remarkable tree, producing its leaves son-

times three in a sheath, and sometimes only one. The latter peculiarity induced Dr. Torrey, and even Captain Fremont, to name it *P. monophylla*, or the One-leaved Pine, which, had that circumstance been constant, would have been very appropriate. The seeds are large and eatable, so pleasant and wholesome that they form a large portion of food of the Indians who reside where it grows. The cones are produced plentifully, and therefore it would be a desirable addition to our fruit-bearing trees in this country. The Indians call it the Nut Pine, and these (the nuts) are said to be of a pleasant almond-like flavour. As yet it is rather scarce, but will, no doubt, soon be abundant, as it is hardy enough to produce its delicious nuts in this country. It is a low-growing tree, averaging about twenty feet high.

Pinus Halapensis (Aleppo Pine).—As this is a native of Syria, it is not quite hardy in the northern parts of the island, but bears our winters well in the southern counties. It is, perhaps, the most elegant of all Pines, and wherever it will exist should be cultivated. It is even worthy of a place in a conservatory. It grows rapidly, and is a somewhat low-spreading tree.

• *Pinus inops* (Poor or New Jersey Pine).—Often mistaken for *P. mitis*, but its leaves are shorter, and it is not so handsome in habit.

T. APPLEY.

(To be continued.)

MAKING ASPARAGUS BEDS.

THERE are, doubtless, many gardens where the important work connected with the raising of permanent crops will have been retarded by the unusual wet season we have had; and, in some instances, we fear the press of other duties in the spring months will prevent many things being done which were contemplated early in autumn; this, of course, relates only to such jobs as can, without any great sacrifice, be put off until another year. But there are some operations which can be as well done in spring as autumn, and amongst that number is the formation of Asparagus beds.

In many gardens, situated in districts uncongenial to healthy, vigorous vegetables, the production of this one in good condition is anything but an easy matter, delighting as it does in the deep, rich, alluvial soils found in the valleys flanking many of our rivers, and similar places where the accumulated richness of the adjoining heights had, through countless ages, poured their treasures into the flat below, has certainly given the locality a character and combination which we in vain may look for in any mechanically-contrived soil, which we, by mixing opposite substances, may substitute for it. But it becomes the thinking cultivator to consider what can be done to render them as productive as possible; and we all know how much has been done under such adverse circumstances, that we may yet hope to see the difficulties attending the growth of really good Asparagus overcome, when our knowledge of the laws relating to soils and their component parts shall enable us to present each individual with its own particular mixture. Now this part of our craft has certainly not been very successful yet in the culture of Asparagus, as I have seen beds that had been trenched a yard deep, and brushwood, stones, and other drainage, buried in the bottom by waggon loads, and all to no purpose. The Asparagus certainly did not perish wholesale, but it did so piecemeal, after producing for a very few years some few heads of very indifferent Asparagus. That there was something radically wrong in the matter, was evident to every one; but that it was not owing to the want of manure and other enriching substances according to the beds with a liberal hand, but to the mere adding of earth and after one level of good useful dung, both fresh and

decomposed, is still unable to afford this vegetable that description of food it is by nature adapted to assimilate, and consequently valuable matter is needlessly thrown away. Now, though it may appear feasible that a plant, like the Asparagus, producing such a quantity of fresh roots every year, and sending them to seek food every year to the same place their predecessors did the year before, must necessarily, sooner or later, exhaust that spot of those ingredients most suited to its growth; but somehow, the requirements of the plant is such, that merely adding large quantities of manure on the top of the beds every autumn, for the rains to wash the juices down to the roots, is not the way to afford the latter the food most in accordance with its wants. Much of it is necessarily washed below the action of the roots, if the soil be at all of that porous kind the Asparagus delights in; if it be not, the result will be equally unsuccessful; because a heavy, tenacious soil, that is retentive of water, will never produce this vegetable in good condition. Now, though we do not deny but that dung so placed on old asparagus beds, and its juices, by the rains of winter, allowed to filter through the stratum of soil forming the beds, may do some good, yet we cannot regard it as the most profitable way of supplying food to the plant, because the latter does not require it at the time it is offered; consequently, it is easy to infer that much of it must necessarily be lost. As the action of the roots of the plant and that of its top are reciprocal, it follows, that when food is administered, it ought to be at such times as these important agents of the plant's welfare may benefit themselves to the full extent of the quantity given, which, of course, every one knows is in summer; therefore, to those who wish to excel in the production of this vegetable, we say, supply it liberally with liquid-manure during the summer months, and now and then add a little salt to it; by this means the roots will receive all the benefit of the substance applied at the time they require it most; but, as the present and forthcoming season is the one suited to the formation of new beds, a few words on the subject will, perhaps, not be out of place.

In those gardens where the soil consists of only a thin stratum resting on an impervious clay, or hungry sand or gravel, where vegetation is simply made to flourish by excessive applications of dung, &c., on such soils some extensive operation must take place if good Asparagus be required, because the depth of good staple soil it requires demands that as one of the primary conditions to insure success; but the treatment of ground resting on retentive clay must be different from that on porous matter; the latter, parting quickly with superabundant moisture, must be removed to make way for a stiffer substance. The practice is this: a plot of ground having been fixed on for the intended beds, first remove all the surface-soil that is good, then the inferior portion, to such a depth as will allow a cavity of not less than two feet good, or, if two-and-a-half, so much the better. The bottom of this excavation we expect to be sand or gravel, porous to an undue degree. Now, on this thirsty substance, I would place clay, or retentive loam, to the depth of three inches, which would arrest the descent of the moisture, while, at the same time, the demands for water below would suck sufficient from it to prevent its ever becoming soddened by too much moisture. The materials for the bed may then be put in at once, taking care to have a sufficient quantity of a stiffish kind of soil in the compost, because the imported portion will eventually assume the character of that to which it is annexed; it is better, therefore, to supply it with these ingredients, which are most slow in effecting that change, while a sufficiency of dung and other things ought likewise to be supplied, so as to entice a vigorous growth to the plants when first planted there. In the compost used, it would be better for all the ingredients to be mixed

some time before being put in; but this is not absolutely necessary, because some little time elapses before the roots of the plant reach that part of the bed which has least access to the air, during which time it will have amalgamated itself with the objects surrounding it. We may observe, that amongst the soils to which Asparagus has a great aversion, is the one in which iron predominates, this soil, which shows itself so conspicuously by little pools of water having a sort of skin on their top and the bottom, after it has receded, will appear red and rusty—this soil is highly injurious to the Asparagus, and when this predominates in a neighbourhood, we have little hopes of success there, except by extraordinary means. Lime and chalk are less objectionable, although they are not the proper food for this plant either. The rich alluvial soils of the vale of the Thames is more the debris of other things, and we do not know any place where such good Asparagus is grown. But a fair share of success will attend the cultivator who takes the trouble, as above, in dry, hungry soils. The damp thin ones, of a retentive character, require different treatment; they want additional soil, without excavation. In other words, whatever is added thereto must be done so as to raise the plot above the general level of the adjoining ground; for we have no hesitation in saying, that to excavate the subsoil, which we take to be clay, and fill in some six inches or more of loose stones and other drainage, and then fill in the top earth, is worse than useless, unless there be an efficient outlet for all water collected in the stratum below, which is not always the case; besides which, ground of a decidedly stiff nature has a tendency to convert other soils that may be as far from the surface as itself into a like stiff character. These, and other reasons, lead us to prefer making new Asparagus beds on ridges elevated above the natural ground, in order that the stagnant moisture may be so far avoided as not to do much harm; it is likewise advisable to use porous substances in this mixture with more freedom than in the preparation of beds on the light, open soils first adverted to, because the adhesive nature of everything surrounding it will render that more necessary.

As it is important that beds intended for permanent use hereafter should be well made, and not denied anything likely to ensure their well-being, yet it is equally necessary that all operations should be done when the ground is tolerably dry; it is, therefore, as well to leave it undone until spring, when it may be performed without that plunging and treading which is disastrous to soils at this wet season of the year. The planting may be then done likewise, if one-year-old plants be preferred; but some sow at once where they are to remain; and some sow early in spring, on some good border, and plant out in July or so, when the seedlings will move without loss. Whichever way be adopted, it is better to avoid that heavy crop of vegetables which many, in their anxiety, seem determined to have on ground they have treated so liberally to dung, forgetting, at the same time, the injury it does to the legitimate occupants of the beds. This, however, is more a matter for after-consideration; but the material for the maker of the beds may be prepared in the meantime, so that when the fitting time does come everything may be ready. The plan of sowing or planting differs much with many cultivators; but, usually, rows two feet apart are thought best; and two or three years afterwards every third one taken away, leaving a space for an alley, which is also not without its uses, for summer vegetables may be cultivated there when shade and moisture may be denied them elsewhere. There are many other modes, and all tending to the same end.

J. ROSSON.

THE GARDEN PILFERER.

By the Authoress of "My Flowers," &c.

THERE may be, among my cottage readers, some who are, or some who know such as are, characters very like one I am going to remark upon; and, as I doubt not, they are little considering the end to which they are travelling, I would earnestly pray their attention to the conduct and condition of an unhappy woman, whose name I shall call Betsey.

She bore for many years, and with some persons, the reputation of being a kind daughter to an aged, bed-ridden mother; but her neighbours could have told a very different tale if they had chosen. She had been always used to outdoor work, and when she was middle-aged she became a regular weeder, and useful garden-woman, in the employment of a gentleman in the neighbourhood. She was so active and handy in her work that she became a great favourite, and was allowed to pick up snap wood, and often received her apronful of vegetables, with other little perquisites, such as favoured servants receive from their employers. Her poor old mother died, and Betsey, having only herself to provide for, got on very well. Her wood-house began to be so full of faggots that they poked their way out at every crevice; only, as she was out all day, and only needed a fire at night, people could not put their finger upon anything against her.

Fruit and vegetables have no legs or feet, it is well known; but those in the garden of Betsey's master disappeared in a marvellous manner. Trees stripped themselves of gooseberries, apples, cherries, &c., as if by fairy hands; no one could tell how they went, or where they were gone. Betsey looked extremely distressed and innocent, but privately gave her master to understand, that "the young gentlemen were always in the garden after the fruit when his back was turned," and no doubt they were the offenders. It is very difficult for boys to clear themselves of charges such as these; but other members of the family, who knew them to be false, began to suspect the person who made them. The other persons employed about the house had worked there for years, and were well known; but there was a something about Betsey, both in look and manner, that was not open and honest, and, altogether, she became an object of doubt to all but her unsuspecting master.

It was a very long time, some years, during which all this was going on; but at last a rumour reached the family, that was closely enquired into; and it was found that Betsey had all this time been secretly selling fruit and vegetables in the village, assuring her neighbours that her master had entrusted them to her to sell for his own profit, and that if she did not get the money for them, and take it down regularly to him, that she should lose her place. Here was a fact, and a foundation to act upon. The suspicions and doubtful accusations that had had so effect upon Betsey's master hitherto were now proved to have been no unkind and groundless charges; she was the thief, and the "young gentlemen" were innocent. Of course, she was immediately discharged, and then many things came to light which had been all dark and mysterious; and the villagers were very glad to find that justice had overtaken the guilty at last.

Some time after this, Betsey went to work for another family, at a little distance; but she was there a very short time, and was dismissed for clearly proved dishonesty, so that no doubt remained of her want of character on this point. Very strange tales were told of her, too, with regard to money, that she had lent money to the man from whom she rented her house, and that "the wife" were in her hand as a security. Events have proved the truth of this must be true; and how was a poor worker in the fields to amass money?

In the course of time Betsey's health failed, and she was unable to work. None of the neighbours liked her, or even thought well of her. Her landlord was constantly at her cottage, and was heard to say she should never want; and no one cared therefore to go near her. They did not like her ways or her doings.

When her old master was borne to his last resting place by the "cottage gardeners" who had for the longest period rented his allotments, Betsey crawled out of her house to see the procession pass. She said he had been her only friend; and so, indeed, he had, but she had abused

his kindness, robbed and deceived him, and tried to injure his character, too, for her own ends.

Since then she has been greatly afflicted, somehow or other, in her limbs; it was painful to see her creeping down the street upon crutches, scarcely able to move one foot before the other, and evidently in great pain. The expression of her face was always bad, but it seemed to grow worse; and as she came and went on her weary way to church, or the shop, no friend looked pleasantly at her, or dared to ask her how she was. We have the highest warrant for knowing, that "Godliness hath the promise of the life that now is, as well as of that which is to come." Poor Betsey's "life" was not one of promise; it seemed to be one of desolation and pain, as well as of want of reputation, and altogether she was a melancholy spectacle as she laboured onwards.

One day, about a month ago, we ourselves happened to see her creeping onwards in her long cloak, bent down as usual, and "humping," as the Scotch say, with her customary difficulty. We had, I believe, only just turned out of the village, when she was seen to reel and fall, and lie helplessly on the ground. The neighbours raised her with some effort, and carried her into her cottage, where a bed was made, on the kitchen floor, and she was laid in it. There she has remained till this hour, and there she will remain until she stands before the Great White Throne.

For some days she was scarcely sensible, but her senses have returned, so that she can at times talk and listen; but, as a neighbour said, "hot hands and her tongue are all of her that can move;" she is otherwise powerless, and lies like a log upon the bed, in the little narrow comfortless kitchen where she had lived so long, a melancholy sight. Two of her neighbours, who are blessed with "bowels of mercy," take it by turns to sit up with her. They say she is thankful and quiet, but dreadful to move, from her cries and helplessness. The state of her mind is far worse than her body—hard, unconcerned, and satisfied with herself! Half-wandering at times, yet contented because the depths within have never been broken up, she lies a spectacle at present to men and angels. "Oh that men were wise, that they understood this, that they would consider their latter end!" To those who speak to her of her spiritual state, she returns hard, indifferent answers; but while life is prolonged, there is yet hope that the day of grace may not be past.

I would earnestly entreat my humble readers to ponder this in their hearts. I would suggest to those of a higher class to put this paper into the hands of such as are employed in their gardens and farms, because it may, by God's blessing, touch some heart going on still in its wickedness, and perhaps in the very way that Betsey went. She lived without raising one kindly feeling; no one liked her, or dared to go near her, because of the language she used. Her house was the abode of sin. She robbed and injured a trusting and good master on earth, and became greatly, wonderfully afflicted in her body. Everyone shunned and thought ill of her. She lived without God in the world, and has been struck down before the eyes of man, and laid helplessly aside. She is really the most desolate object possible, because, though kind offices are performed for her, she has no friend—no one to bid God bless her. Sin will always find us out.

Oh! let all who are unfaithful to God and man remember that punishment must come, and that none can be so dreadful, so horrible, as calmness and indifference on the bed of death! Better to suffer agonies of terror than cold self-contentedness. "Ephraim is joined to idols: let him alone!" Let tongues can tell what it is to be left alone of God, working, no awakening of the Spirit; but to be left alone in the body, in the cold hopeless sleep of death.

Let my humble readers "awake and arise from the dead," now while there is time for repentance, "and Christ shall give them light." If they could see Betsey as she lies now, they would feel that but "one thing is needful," and seek grace to choose "that good part," that shall not be taken from them.

ALLOTMENT FARMING—FEBRUARY.

SURELY it is high time that this month changed its old habit. A "February" month is not exactly the thing the cultivators of the soil require; and we have had a tolerable share of moisture already. Surely the old man living cannot call to mind such an extraordinary winter if such it may be called, as we have partly passed.

Here we are, then (January 18th), after undergoing nearly a quarter-of-a-year of dullness, almost incessant, and a total absence of frost, or, at least, any worthy name, in November, December, or January. This state of affairs has thrown cultural transactions into such a puzzling position, that men grow grey in the service scarcely know how to proceed. However, one thing is certain—surplus waters must be got rid of, soils must be exposed to the air, and this in as little time as possible. The spring, with its crowding, is pressing hard upon us, and "he gives twice, who gives quickly," may be borne in mind.

And first, *drainage*—who has not better appreciated its importance than ever he did before? The question of its propriety remains precisely the same, but the recent excessive period had been a good illustration of the singularity of drainage, or, stagnant or adhesive soils. When a writer advises sharp attention to drainage, and the amelioration of the staple soil, during a fine, dry, and unmelting period, people are apt to think that he is "straining a point." But if he be a "true prophet," the recurrence of damaging periods, will plainly show that, although seasons may vary, may have "a run," may prove very capricious for a lengthened time—yet, that cultural principles, based on averages, and backed by both science and practice, will at last have to be resorted to, if progress be the world.

And now what shall we do? This is the main question under existing circumstances. To those who have omitted putting our drainage advice into practice in due time, we say, open temporary water-courses wherever possible, if needed. If only for a few weeks, try and coax all water away, in order that the air may enter the pores of the soil; for even the poorest of our allotment friends must know that two bodies cannot occupy the same space at once. If any doubt this, let him fill a gallon vessel with water, and then pour in a gallon of any soil, or, indeed, any substance, and he will find the heaviest body speedily displace the lighter. But our old-fashioned country-bred men, who have never been to Oxford, will scarcely believe that water is a body, or that air is a thing demanding space. But so it is, and our good friend, Mr. Fish, could tell a pretty tale, in his philosophising way, about the old geranium in the cottage window, and would, doubtless, show how it was that when this old pet became very dry, and water was applied, the soil continued to throw up bubbles, and made a gurgling sound for several minutes. Before the air, which is the great improver, can enter soils to benefit them, depend on it the water must be removed; and it is not a question of air alone, the returning warmth of spring is by such means conducted to the soil—yes, to the very subsoil.

And now the time is at hand in which digging or trenching must be performed; hitherto, doubtless, delayed by the extraordinary winter. Everybody knows, full well, that there are periods set for the getting in of certain crops, and that it is well to come as near to those periods as possible. So nice a point was this esteemed in our younger days, that the gardener about the great Metropolis who did not sow his cauliflowers on the 24th of August, and his early peas about Lord Mayor's day, was not considered an orthodox character. It so turns out, however, that under extraordinary circumstances we may with propriety depart from such rules; and really the character of the past season would seem to warrant such a procedure.

It does appear, therefore, that the coming spring will be late as to operative measures, and unless a singularly dry period occurs, when we have little right to expect it, both sowing and planting will of necessity prove protracted matters. This must put our friends on their guard, and we add a maxim well known to practical men—"better sow late than sow badly." And now for the digging and manuring necessary for the various crops; the time is at hand that such must be carried out. Still, let us add, rather postpone the operation than dig ground in a wet state. "In

spring, more than in many, will it be an act of fairness to allow allotment holders who are but servants, the privilege of a day or two to their own plots, for after hours not to serve to accomplish what ought to be done for several weeks yet. About manures, we must again repeat, in the present state of matters, mixtures, or composts, many of which will, are best for general purposes, and in all such cases we would fain have the ordinary dung of the manure, previously turned and reduced, play a conspicuous little.

It is, indeed, impossible to overrate the importance of the turning and breaking to pieces manure-heaps; dung will not only go much further, but, by mixing more thoroughly with the soil, will thus more benefit the crops. Besides, if guano and *etc.* are added, a practice advisable, even though it be in a small degree, it may be made to mix with the whole mass. We have the concurrent testimony of farmers with our own experience to show that mixtures of manurial matters both go further and prove more beneficial to the majority of our crops. Where old gardens have been long under crops, and contain much dark matter or humus, lime will be found useful, if at hand.

In consequence of the untoward season, digging and trenching will be in arrears with many, and it will be highly advisable to ridge all adhesive soils, if only for two or three weeks, taking care to wait until such ridges are very dry before levelling them down, and taking extra care in the latter process.

Of course, the allotment holder has his course of cropping laid down, and in order that there be no mistakes, let him cut a few sticks, and having flattened one end to write on, get a little stick white paint, and having smeared a little on the smooth part, write on it, whilst wet, with a lead pencil, the digging, manuring, the crop and its successor, or mixed croppings, if such it be; he will thus know at a glance, and be reminded of sowing such as the cabbage-worts for mixing, or for succession.

What seeds are requisite should be procured immediately, and kept in a dry place, and if any old seeds of last year remain they had better be tested. They may be soaked six hours in tepid water, and a given number, say twenty-four, sown in a pot, and placed in a warm room; by counting what sprout, it will be known what reliance can be placed on them.

About the middle of the month the hoe should be run through those Cabbages which were planted in autumn, seeking a dry day for the purpose, and hoeing deep. On the heels of this the plot should be looked over, and any blanks made good from the store beds, which every good cultivator provides in autumn. Those remaining in store must be got out at favourable opportunities, before the end of March. Many will probably be wanted for mixed cropping. For instance, the mangold or swede ground being dug and levelled down in due time, a double row of cabbages may be put down each centre, unless it is required for early potatoes. We have a plot of land from which we have taken crops of mangold for eighteen years; this is manured entirely with our pig and cow-dung, and the sweepings of the chimneys. From this we take a fine crop annually of the Ash-leaved kidney potatoes. One-half is swedes, the other half mangold, and these change about annually. The kidneys are planted in double drills in February, in every centre between where the mangold and swedes will be, and when the kidneys are removed in July, their place is occupied with swedes from a seed-bed.

Onions may be sown in the last week, if the soil is ready, but such is unlikely this season. Let the ground be very deeply dug for this crop; if possible, but, wrought two feet; they will, indeed, descend a yard. If manure is requisite, it may go between the two spits, and if the onions come weakly for a while, some guano-water might be applied.

Parsnips may be sowed about the same time as the onions, trenching deep, and manuring pretty well. A bed of the *Early-horn Carrots* should; by all means, be sown in the middle of the month, in a warm spot, the bed much elevated. These must be protected, like fadishes, and care taken, when up, that the slugs or snails do not run off with them. We must again recommend some dressings to be kept ready in a dry corner; the following is very useful.

One bushel of new saw dust, half-a-bushel of very fine under-ashes, the dust blown out, and one peck of fresh slaked lime, all well blended, or it would be well to slack the lime as wanted. We use this all the spring and seldom lose a crop.

The beginning of February is an excellent time for sowing full crops of *Peas* and *Broad Beans*, or *Longpods*; no pea is better for the cottager than the *Green Imperial* or the old *Prussian*. The Imperial is sooner off the ground than others, and consequently makes way for autumn croppings. A little early *Cabbage* may be sown at the end, and *Lettuces* with *Radishes*. The *Ady's Cos* is the best; it needs no tying. If any August-sown lettuces have been provided, they must be planted out, if in store, in the end of the month, on rich soil.

Potatoes: our practice is to plant early kinds at the end of February, and in the early part of March. If, however, the seed has been preserved as it ought to be, the middle of March will do well. As for the Ash-leaved kidney, we never plant until the end of March; this kind forms an exception to the rest. We make a point of sprouting them before planting. The best plan we know is to spread three inches deep of sawdust on a warm floor in the end of January, and to stick the Ash-leaved kidneys in their end in this material. Here they will produce stout buds of about an inch in length by the end of March, and must be removed so that not a sprout is damaged. We have had much practice with this potato, and know the practice to be sound, because always successful.

Rhubarb should be covered immediately, if not done; old chimney-pots, with a whisp of hay in them, answer well, and these, with warm dung around them, bring it very early. The breeding-time of mice is at hand, care must be taken to destroy them, or woe to the peas.

And now, until we take the pen again, let us advise our small gardeners to be on the alert whilst the spring is young, and by extra efforts, and increased diligence, to endeavour to make up for the untoward season we have passed.—R. EBRINGTON.

THE APIARIAN'S CALENDAR—FEBRUARY

By J. H. Payne, Esq., Author of "The Bee-keepers Guide," &c.

EXAMINATION.—It will be necessary to examine every stock very carefully early in the month, both in regard to its store of food, and to the state of the hive with respect to dampness, for, unless the protection has been very complete, the late continued and driving rains will be found very injurious in their effects.

DAMPNESS.—Wherever dampness and mouldiness are discovered, it will be well to supply a fresh floor board, and in the middle of a mild and drying day to raise the hive all round upon little blocks of about half-an-inch for an hour or two.

FEEDING.—Feeding, I fear, will be found more necessary this spring than in any one that has of late years preceded it, for, from the extreme mildness of the winter, the bees have been in almost constant activity, and, consequently, consuming a much larger portion of food than when in their usual quiescent state; feeding should be effected at the top of the hive, if possible, but, if with barley-sugar, it is not so imperative as when liquid food is used.

ALARM.—Mr. Newman has already sounded an alarm in THE COTTAGE GARDENER of the 6th of January. I hope his "caution" has been attended to by its readers who are bee-keepers, for never before, in my remembrance, has there been so much cause for it.

POUBTRY SHOWS.

TRURO.—The extreme south-western district of England seems to have entered with great ardour on the work of improvement as regards poultry, for on Monday, the 3rd inst., there was an exhibition at Truro, and on the 10th and 11th the Cornwall Society held its second meeting at Penzance. At Truro, we found ourselves in the wing of the market.

house, a building well adapted for the purpose; and in the arrangement for the accommodation of the birds great judgment had been manifested. At two o'clock, the awards having been completed, the public were admitted, and till nine that evening, and four, p.m., the following day, the room continued well filled.

Spanish, as usual, commenced the list, when pen No. 2 shone conspicuous; and its figure, head, and general character, they proclaimed their close relationship to the well-known stock of the most successful breeder of their race, they did full justice, by their condition and feather, to the management of their present owner, Mr. W. J. Lawrence, of Penzance. No second prize was given to the older birds, but the chickens of Mr. Pennington, and Mr. T. N. Miller, received 1st and 2nd prizes.

Dorkings, as a class, stood in great need of the improvement that Poultry Societies are now effecting; another year, and we shall hope to get rid of much that we could not but object to. Weight, no less than plumage, was deficient; and colour and figure were strangely contrasted in the same pen. But the grey birds of Mr. George Williams, and the white, belonging to Mr. Augustus Smith, deserved better neighbours; these were, certainly, fair specimens of their respective classes.

Among the *Shanghaes*, Mr. R. H. Bowman's white birds, both old and young, were the objects of general attention; and closely were their pens surrounded. Good management had placed them here without a soiled feather; and when we add, that in point of shape, as well as size, they would lose by no comparison, it will not be surprising that such unanimous admiration should have been lavished on them. Mr. W. J. Lawrence's and Mr. Blew's birds were both deservedly distinguished by the judge. Mr. Gittus was highly commended; and in chickens, he took a second prize.

Breeders of this class would do well to consider how they may avoid that tendency to legginess that has shown itself at many of our late exhibitions, especially in the cockerels—a fault, we think, most diligently to be guarded against. Let them also remember, that size may be gained at the expense of symmetry, and that mere weight goes but for little.

Malays, Game-fowl, and Hamburgs, follow on the list. Of the two former, we had looked for better birds, especially, when we remembered the beautiful pair of *White Game* that were brought here last year. The *Hamburgs* were not numerous, but included some nice specimens, the property of Mr. Miller, of Truro.

Black Polands could not be commended; but Mr. Hawke, of Truro, showed a good pen of *golden*, and the *silver* of Mr. Miller and Mr. Pennington fully bore out the justice of their awards. Mr. Bowman's white *Polands*, which had been victorious at Birmingham, had equal honours here.

In class 27, for any other distinct breed, a number of *Minorcas* and *Aucanas* were shown. Now these birds, betraying such evident traces of a Spanish origin, however impure and degenerate, have no title to be thus distinguished; and another year will not, we hope, again witness their competition for prizes which should always be reserved for fowls of unquestioned purity of blood.

Of *Gold-laced Bantams*, Mr. George Williams had good specimens; and the *Almond Tumblers*, belonging to the same gentleman, were excellent. Some *Black Carriers*, *Jacobins*, *Fantails*, and *White Trumpeters*, were specially noted amongst the *Pigeons*. Mr. G. Williams's *Geese* and *Turkeys* deserved and obtained the highest approbation. *Ducks* will be better another year; and *P. fowl*, it should be remembered, are shown to great disadvantage at the present season, which must account for Mr. Hawkins's birds in this class not realising the higher step; but judges must decide on what birds are, not on what they may be.

Uniformity in the pens, no less with respect to colour than form and general appearance, will, doubtless, another year be more generally studied than a first exhibition can give time for. Truro, however, may well congratulate herself on this favourable commencement of her Poultry Society; and it is confidently expected, arrangements can be made for the union of this association with the Cornwall Society of Penzance, the objects of both bodies will be far more effectually carried out, and their practical utility more permanently established. There is every reason to believe such will be the result, from the general conviction of

all those who are most interested and best informed poultry matters.

The Judges were Captain Mangell and the Rev. W. Wingfield, of Galval; and we should think that if any could reconcile to their task those who may fill that respectable office, it would be the good-humoured assent to awards, which even the unsuccessful candidates occasion so readily bestowed.

THE CORNWALL POULTRY SOCIETY'S PENZANCE EXHIBITION.

Evidence is daily accumulating as to the practice of the Poultry Societies and exhibitions whose trans have lately occupied so prominent a position in the do. of THE COTTAGE GARDENER. Those who first bestirred themselves in this branch of agricultural economy made up their minds to encounter difficulties, not merely from the indifference, but, in many cases, from the positive opposition of many, who expressed themselves even in terms of indignation at the attempt to suggest a better system of management for that class of live-stock whose well-being had hitherto been so little regarded. And well it was that they were so prepared; for remarks have not been always limited to the good-humoured joke on the trivial character of such pursuits. The readiest and most effectual answer to our opponents on this point, has been the continuous development of the various points of excellence in those classes which are specially distinguished for culinary honours. The *Dorkings*, no less than those other varieties that occupy different degrees of merit in popular estimation, *Geese*, *Ducks*, and *Turkeys*, illustrate our meaning, when we now compare them with such specimens as might be taken as the fair average of some few years since.

Paris, we know, was usually had recourse to for furnishing those choicer specimens of dead poultry for which it had obtained so great a repute; but a few weeks since, we found, to our surprise, that Brighton was the source from which the table of an inhabitant of the French metropolis, confessedly most competent to decide, was regularly supplied; and that even the Parisian poultrymen could not but acknowledge the justice of the award.

At two o'clock on the afternoon of Monday, the 10th inst., the doors of the Penzance Corn Market were opened to the public, whose presence on that, and the following day, fully bore out the expectation of general support, that had induced so convenient an arrangement for both spectators and the objects of their attention.

The 1st prize in *Spanish* corresponded with the Truro award of last week, and, in all the characteristics of that striking variety, proved the judgment of their owner, Mr. Lawrence, of Penzance, in the selection of his stock from Captain Hornby. His pen of chickens has unfortunately suffered by the mutilation of the cockerel's comb, which, with other evident tokens of a recent conflict, told against them; but an accident of this kind we are all liable to; and, provided 300 miles in mid-winter be not an insurmountable obstacle, Mr. Lawrence must uphold the credit of Cornwall at the Birmingham meeting of the present year.

Of *Grey Dorkings* we had a good lot, especially those belonging to George Williams, of Trevince, near Truro, and E. Rodd, Esq., of Penzance; and closely riveted on these pens did we notice the attention of many of our agricultural neighbours, and their consequent applications as to where good specimens might be attainable. In the *White* birds, there was, perhaps, a want of substance; but those of Augustus Smith, Esq., the Lord Proprietor of the Scilly Islands, had many good points; but on noticing a deficient bird, which spoilt the pen, we found that those intended to be shown had been claimed at Truro, and, consequently, no time remained for a more careful selection. Mr. Williams took a second prize; and a *cock* of Mr. Hicks would have done more with better companions.

The *Shanghaes* were deservedly commended by the Judge, Mr. Andrews, of Orchester; and commendations from such an authority may well be prized. Here, again, was Mr. Lawrence successful, taking first prizes with his buff birds, in both the old and chicken classes. Equal second prizes were awarded to Mr. Bowman and the Rev. W. W. Wingfield, of Galval; while the weighty birds belonging to Mr. Blew were honoured by the double rosette that indicated high commendation. It would be a bold assertion to speak of the existence of better white *Shanghaes* than Mr. Blew's.

some of the—assuredly, in condition they could not be surpassed—need in symmetry, no less than weight, their presence must have relieved the Judge's mind from doubts of any kind. A remarkably fine pen was shown by Mr. Gittus, but their unequal legs told against them; and it seen otherwise, the exhibition would probably have been different. Mr. Rodd may well, regularly compact and weighty dark partridge hen, has a res wickens, Mr. Lawrence and Mr. Bowman took first place on, pre the buff and white respectively; no second prize little ed in this class, but "highly commended" was affixed at it is, and Yinghi's pen, bred from his birds that took the prize in the older class. Mr. Gittus was here again commended for pen 55.

Malays women say little of; nor need we dwell on Game fowl; among which, however, Mr. Rodd had a good grey cock, but it was with him did not match.

Mr. Grenfell's *Silver-pencilled* and *Spangled Hamburgs* carried off a succession of second prizes—but better things await him another year, if in the *Spangled* class he obtains rather lighter colours, and more distinct markings, both in that as well as in the *Pencilled*. His birds were well shown and formed a very attractive part of the exhibition.

Poland fowls, as so often happens, were certainly capable of improvement; Mr. Bowman, however, took a first prize for his golden birds; and the same gentleman also exhibited a very good lot of white bearded Polands—which we are heretical enough to regard as an improvement on their clean-chinned relatives. Mr. Pennington's *Silver-spangled* birds were deservedly noticed. Both these pens were winners of Goldmin, and, consequently, appeared here as extra stock. Among fowls of any distinct breed, Mr. Wingfield took a prize for his *White Silk Fowls*. Those birds are as easily kept within bounds as Shanghaes themselves, and are excellent layers, sit well, and as mothers are not to be surpassed. A gigantic pair of "*Brahma pootra*" fowls, recently imported, and the property of Mr. Bowman, were very striking objects.

Mr. Williams was victorious with the same pen of *Gold-laced Bantams* that were at Truro. Exhibitors in this class should study the meaning of the word *lacy* as distinguished from *spangled*. There were good pens of white and black.

Pigeons formed one of the best collections we have seen for a long time. It would, indeed, have been a hard task to have picked out a bad pair, and few varieties were absent; Harbs, Jacobines, Fantails, Carriers, Tumblers, Silver Owls, Turbits, and Nuns, were all represented.

In *Geese*, Mr. Williams showed three truly magnificent specimens; and adjoining them, but not exhibited for prize, were a pair of young Toulouse birds, belonging to Mr. Wingfield, and bred from the stocks of the late Earl of Derby. Mr. Williams' three birds together must have exceeded 60 lbs.; and, as we noticed that one of the Geese was afterwards transferred to Mr. Wingfield's pen, we should augur well for this class at the next exhibition.

Mr. Williams's *Turkeys* were excellent; and adjoining them we found the *Pea fowl* of Mr. Bolitho in better condition than we ever remember to have seen their race at this or any other exhibition.

Mr. Bedford's *Aylesbury* and *Canary Ducks* were first rate, and his black East Indian would have stood in the same post of honour, had not the third been marked with a few white feathers. When we say that Mr. Williams's Ducks, of the common breed, weighed 26 lbs. the three, further improvement is hardly to be looked for.

Our list; and the vexatious of Mr. Andrews cannot but satisfy the members of this society that their past efforts have succeeded, while their future labours are abundantly encouraged. When we hear from such authority that *Shanghaes* were shown at Penzance as good as what appeared at Birmingham, in December last, and that other classes were so deserving of high honour, we feel secure that Cornish enervy, remembering its good old motto, "*One and all*," will successfully carry out the good anticipations of those who, in different parts of the country, have already so zealously aided the interest of the poultry-keeper. Thus combined, we shall take the surest means for rendering these institutions permanently useful; and, by forming a society for the Western Division of the County, avoid the manifold objections of the minute absorption of small local associations.

In the following list those classes are omitted in which no prize was awarded.

SPANISH (Cock and two hens of any age).

Class 1.—First prize, 1, Mr. W. J. Lawrence, Penzance; second prize, 2, Mr. W. C. Pennington, Penzance.

GREY DORKINGS (Cock and two hens of any age).

Class 2.—First prize, 8, G. Williams, Esq., Trevince, Truro; second prize, 9, H. Rodd, Esq., Penzance.

GREY DORKINGS (Cockerel and three pullets, chickens of 1852).

Class 4.—First prize, 13, G. Williams, Esq., Trevince, Truro.

WHITE DORKINGS.

Class 5.—Second prize, 19, G. Williams, Esq., Trevince, Truro.

COCHIN-CHINA OR SHANGHAI (Cock and two hens of any age).

Class 7.—First prize, 37, H. H. Bowman, Esq., Penzance. Buff.—First prize, 39, Mr. W. J. Lawrence, Penzance; equal second prize, 26 and 28, H. H. Bowman, Esq., and the Rev. W. W. Wingfield, Gulval.

COCHIN-CHINA OR SHANGHAI (Cockerel and three pullets, chickens of 1852).

Class 8.—First prize, 40, H. H. Bowman, Esq., Penzance. Buff.—First prize, 45, Mr. W. J. Lawrence, Penzance. Both classes of Cochin-Chinas very meritorious.

MALAY (Cock and two hens of any age).

Class 9.—Second prize, 60, M. W. J. Lawrence, Penzance.

MALAY (Cockerel and three pullets, chickens of 1852).

Class 10.—Second prize, 62, Mr. W. J. Lawrence, Penzance.

GAME FOWL (Cock and two hens of any age).

Class 11.—Second prize, 69, P. Grenfell, Esq., Gulval.

SILVER-PENCILLED HAMBURGH (Cock and two hens of any age).

Class 17.—Second prize, 75, P. Grenfell, Esq., Gulval.

SILVER-PENCILLED HAMBURGH (Cockerel and three pullets, chickens of 1852).

Class 18.—Second prize, 77, P. Grenfell, Esq., Gulval.

SILVER-SPANGLED HAMBURGH (Cock and two hens of any age).

Class 19.—Second prize, 79, P. Grenfell, Esq., Gulval.

SILVER-SPANGLED HAMBURGH (Cockerel and three pullets, chickens of 1852).

Class 20.—Second prize, 82, P. Grenfell, Esq., Gulval.

POLAND FOWL (GOLDEN) (Cock and two hens of any age).

Class 23.—First prize, 85, R. H. Bowman, Esq., Penzance.

POLAND FOWL (GOLDEN) (Cockerel and three pullets, chickens of 1852).

Class 24.—Second prize, 87, Mr. J. R. Branwell, Penzance.

For any other distinct breed.

WHITE SILK FOWL (Cock and two hens).

Class 27.—Second prize, 91, Rev. W. W. Wingfield, Gulval.

BANTAMS (Cock and two hens).

Class 28.—GOLD-LACED—First prize, 99, G. Williams, Esq., Trevince. WHITE—First prize, 102, Mr. W. H. Foss, Penzance. BLACK—First prize, 105, E. C. Marriott, Esq., Tehidy, Truro.

PIGEONS.

Class 29.—First prize, 107, Mr. W. Adams, jun., Penzance (Carriers). First prize, 108, Mr. J. Fox, Penzance (Harbs). First prize, 111, M. W. Wearne, Penzance (Black Fantails). First prize, 110, Mr. J. Fox, Penzance (Jacobins). First prize, 117, Mr. H. Baynard, Penzance (Turbits). First prize, 118, Mr. J. Fox, Penzance (Nuns). Equal first prizes, 119 and 120, Rev. W. W. Wingfield, Gulval, and Mr. J. Fox, Penzance (Trumpeters). First prize, 121, G. Williams, Esq., Trevince (Tumblers). First prize, 127, Mr. H. Baynard, Penzance (Silver Owls).

GESE.

Class 30.—First prize, 130, G. Williams, Esq., Trevince, Truro.

DUCKS (Drake and two ducks).

Class 31.—AYLESBURY—First prize, 134, J. S. Bedford, Esq., Penzance. OTHER VARIETIES (COMMON)—First prize, 140, G. Williams, Esq., Trevince. COLOURED CALL—First prize, 144, J. S. Bedford, Esq., Penzance. WHITE CALL—Equal second prize, 145 and 147, Rev. W. W. Wingfield, and A. Smith, Esq., Mr. Wingfield's birds being Coloured Calls.

TURKEYS (Cock and two hens).

Class 32.—First prize, 132, G. Williams, Esq., Trevince, Truro.

PEA FOWL.

Class 32.—First prize, 133, W. Bolitho, Esq., Chyandour.

GUINFA FOWL.

Class 33.—Second prize, 148, W. Bolitho, Esq., Chyandour.

SILVER PHEASANT.

Class 33.—First prize, 149, Mr. W. J. Lawrence, Penzance.

ON THE DESTRUCTION OF THE WIREWORM.

Of all the annoyances the gardener is subject to, and there are not few, there is none, perhaps, so universally experienced as that caused by the ravages of the wireworm.

